

WORLD CHESS CHAMP SPEAKS  
EYEBALL-BENDER CONTEST  
SOLVE DSZQUPHSBNT!

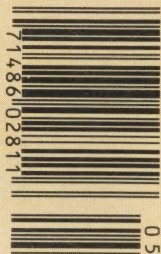
HOME VIDEO GAMES  
OLD VICTORIAN PUZZLES  
KING TUT'S FAVORITE GAME

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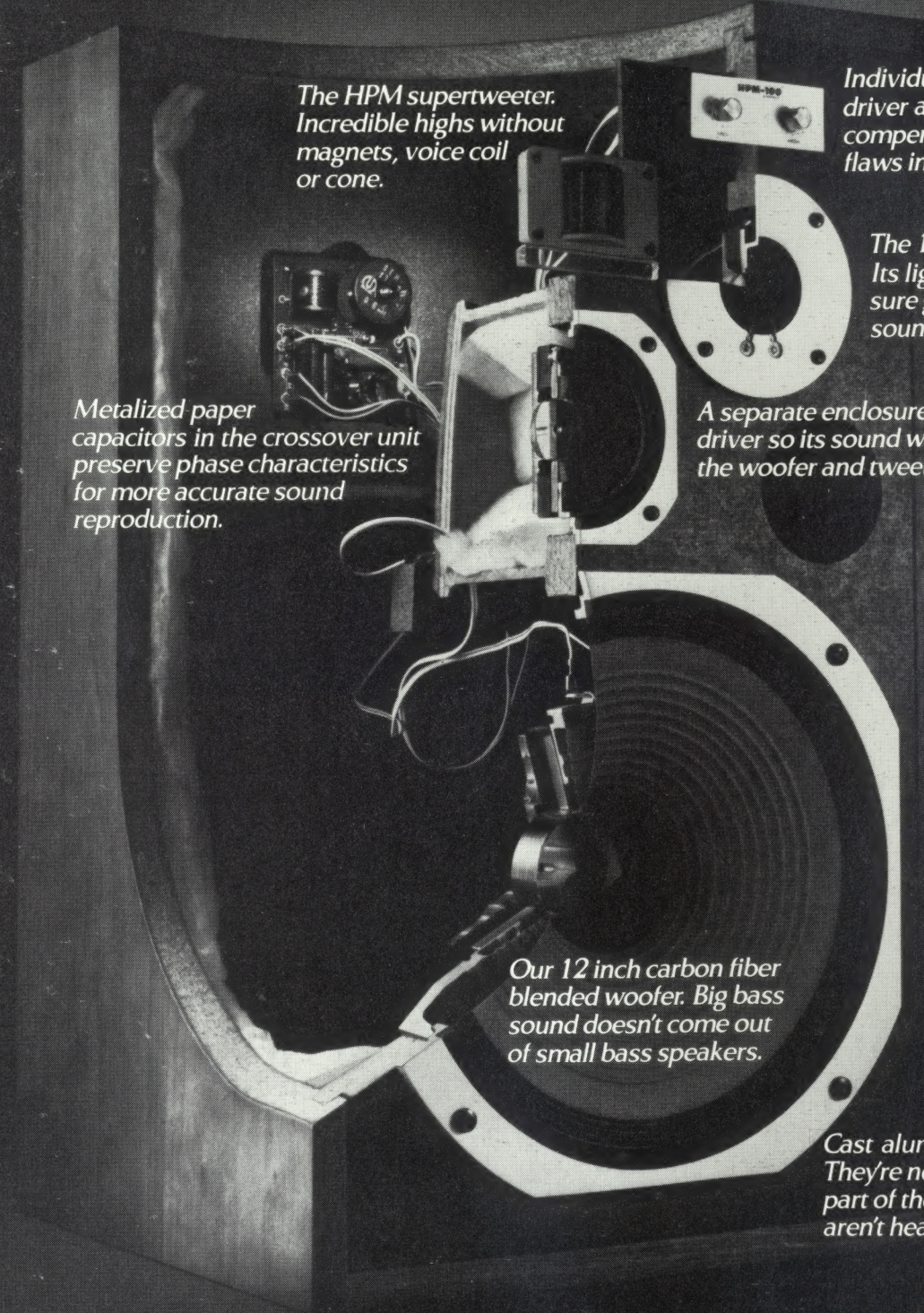
# GAMES

MAY/JUNE 1978

\$1.25







*The HPM supertweeter. Incredible highs without magnets, voice coil or cone.*

*Individual controls for the driver and tweeter. So you can compensate for the acoustic flaws in your living room.*

*The 1-3/4 inch tweeter. Its light but rigid cone makes sure guitars don't end up sounding like saxophones.*

*Metalized paper capacitors in the crossover unit preserve phase characteristics for more accurate sound reproduction.*

*A separate enclosure for the 4 inch driver so its sound waves don't interfere with the woofer and tweeter. Or vice versa.*

*Our 12 inch carbon fiber blended woofer. Big bass sound doesn't come out of small bass speakers.*

*Cast aluminum speaker frames. They're not seen too often, which is part of the reason speakers like this aren't heard too often.*



# WHEN YOU BUILD A SPEAKER TO SOUND GREAT ON EVERY PART OF THE MUSIC, YOU CAN'T CUT CORNERS ON ANY PART OF THE SPEAKER.

A single HPM-100 weighs almost 60 pounds.

The fact it weighs more than a Large Advent speaker, Bose 901 or JBL L100 is not an accident.

Our speaker frames are made of heavy cast aluminum instead of the usual stamped metal, so you hear only the speakers vibrating and never their frames.

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And our cabinet is made out of special compressed wood that's denser and heavier than ordinary wood. So the sound is forced out of the cabinet instead of being absorbed by it.

Of course, not everything that adds to the sound of an HPM-100 also adds to its weight.

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And our 12 inch woofer has a long throw voice coil and unique carbon fiber blend cone (instead of the more typical cardboard cone) that work to produce the kind of realistic bass you not only hear, but feel.

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But we figure at this point you'd rather hear our speakers in person than hear any more about them from us.

**HPM-100™**  
The all-around great speaker.



# "These days, why do I smoke?"

"With all the talk about smoking and high tar, it didn't take much imagination for me to conclude that the cigarette of the future would taste good and probably be low in tar as well.

"So I figured why wait till then?

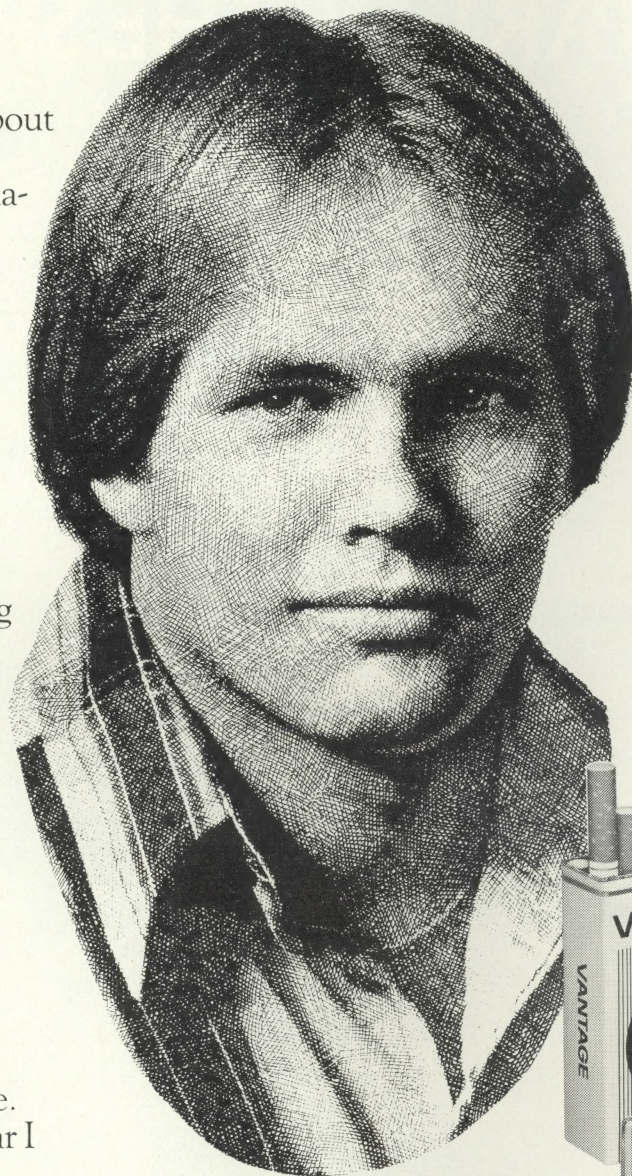
"After all, I like to smoke. For taste. For enjoyment.

"So I started looking for a low-tar cigarette that could give me everything I wanted from smoking.

"Well, that wasn't easy. Most low-tar cigarettes had no taste and drawing on them made my cheeks meet.

"Then I discovered Vantage.

"It was my kind of cigarette. It gave me taste. Pleasure. And the low tar I was looking for.

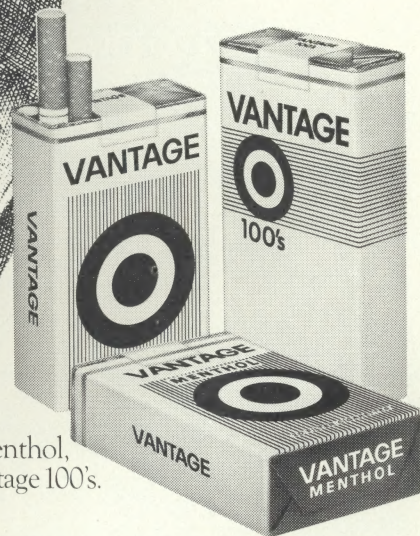


"Vantage is the cigarette a lot of smokers are going to be turning to in years to come.

"For me it was a lot more pleasurable to turn to them today."

*John O'Neill*

John O'Neill  
Stone Mountain, Georgia



Regular, Menthol,  
and Vantage 100's.

## Vantage. A lot of taste without a lot of tar.

Warning: The Surgeon General Has Determined  
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MENTHOL: 11 mg. "tar", 0.8 mg. nicotine, av. per cigarette, FTC Report AUG. '77;  
FILTER 100's: 11 mg. "tar", 0.9 mg. nicotine av. per cigarette by FTC method.



# GAMES

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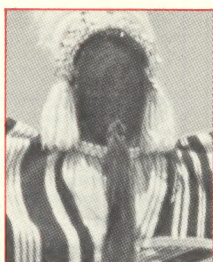
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Cover: Photograph by Ken Robbins.



## Editor's Message

Spring is here, and we've really got the fever. We're closing the office for the day! Gonna step on out and get high on our new tom-walkers (page 16), maybe even take in a few sights while we're up there (Map-pit, page 20). The days are getting longer, and the kids will soon be out of school (page 50). Diggery here has gone and fallen in love. What, you too? . . . Well, come on out and play anyway.

We'll bring along some cards and make our own rules (page 18). Merlin the magician will be coming with some old-time puzzles, King Tut with his favorite game, and a real wizard with 111,111 dominoes.

So, what are you waiting for? Get out of the kitchen (page 37). You can bring your pencil with you, and your video game will still be there when you get back (page 52). Spring won't wait. Let the breezes blow. Let your brains hang out. Let the spirit of play return to the land.

*Michael Donner*

Michael Donner

P.S. Don't forget to bring a camera (contest, page 49).



# GAMES

May/June 1978  
Volume 2, Issue 3

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Jerry Zimmerman

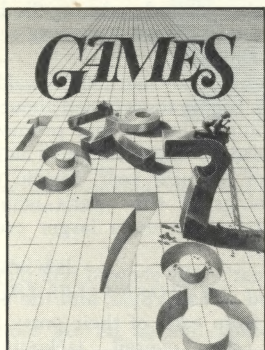


# LETTERS

## New Year's Hangover

In reference to your January/February cover, I want to state the fact that the man carving the shiny red block of what looks like plasticine will not be able to carve an 8 out of that single piece. I would like to know if he intends to bend it by heating; or if he decides to use two separate pieces to complete the 8.

Amy T. Ferver  
Chadds Ford, PA



*The effort to turn the past into the future is indeed a futile one. If the artist, in his role as Janus, continues to carve away at the 7 he will end up with about 40 percent of an 8. He could put it in an 8-mold and pour in additional liquid plastic, but by that time he might need a 9.—Ed.*

## Points of View

I find I must take exception to Kevin Gallagher's letter in the January/February issue. GAMES is devoted, and rightly so, to all types of games and puzzles, and tries to offer articles and features for all minds, from the most simple to the most complex. *Re-birth* may seem to him only for collectors and historians, but I found it fascinating as a game and interesting in its offering of an insight into Buddhist philosophy. He is correct in saying that war and strategy cannot be ignored, but there are many game magazines that deal abundantly with war and strategy games. Remember, not everyone wants to see those overly detailed strategy games.

Allen Neuner  
West Orange, NJ

I'm now taking about twenty-four publications. Most are monthly, and I hardly get a chance to read them all. The greater the frequency, it seems, the worse the magazine. You only come out six times a year. You're in such a specialized field, I would think to press the issue to a monthly might be hard—at least to maintain your editorial quality.

Michael B. Wright  
Seattle, WA

Please don't ever omit the puzzle section from the center—so what if you can buy books with puzzles in them—I enjoy the center section as much as the rest of the book.

Mrs. W. Davis  
Bass River, Nova Scotia

## Contest Entries

I am a subscriber and I like to enter the contests but I find it very annoying to have to cut out the entry coupon and have my magazine ruined! Please position contest entries so they do not detract from the magazine.

Mrs. Tookmanian  
Clifton, NJ

*You may enter any contest by copying the entry coupon on a separate sheet of paper. It's perfectly legal and your magazine will remain intact.—Ed.*

Please, no more answers on postcards! Paste and glue ooze through, so you cannot stick things to them. Besides, anyone can read one's "sure-to-be-the-winner" card.

Verna M. Ott  
Mena, AR

*The postcard rule is herewith repealed.—Ed.*

## Winning Words

I wish to express my appreciation for being awarded first prize in the Beyond Mother Goose contest ("Contest Results," March/April), and for the very welcome and useful prize of the *Webster's Third New International Dictionary*. May GAMES magazine have continued popularity and prosperity.

Walter O. Goddard  
Salem, MO

## The Well-Changed Rule

I am fascinated by Bernie De Koven's article about handicapping (January/February, page 41), not only the evening-up of odds in a competitive game, but especially the transformation of a game to one of cooperation. As one who has difficulty winning or losing, I am happy to find an alternative to both, but I suspect that this article is only a brief look at the work done in this area.

Richard R. Govea  
Palo Alto, CA

*This is a pet interest of ours, too. For a start, have you tried "Squeamish"? Rules: Any number of players try to keep a soft beachball in the air by bouncing it off their heads, in no particular sequence. Collectively they try to top their previous record number of bounces before the ball touches the ground. We made it up to twenty-three last summer. As for the significance of the name, we'll leave you to discover that for yourself.—Ed.*

## Number One

We were all pondering your November/December Eyeball Benders (page 57) and were really puzzled over # 22, "Saucy." My six-year-old son strolled up to the circle of heads at the kitchen table, popped his head in and said (he doesn't read clues), "Oh, that's easy, that's a tomato." He had beaten and outsmarted all of us, and he felt—for once—that the baby of the family can be number 1 some of the time, thanks to GAMES.

Melody Nolet  
Hampton, NH

## Yut and Springers

In your discussion of Yut and Owasakut (January/February, page 12) you recommend substituting a die for the throwing sticks. If this is done in the manner suggested, the probabilities of the various moves in the original games are not preserved. Yut remains unchanged if four dice are thrown. If four odd faces show, move five spaces; otherwise move according to the number of even faces showing. A throw of either all odd or all even faces earns another turn. The probabilities of Owasakut can be replicated in a similar way by using three dice.

Paul Krueger  
Falls Church, VA

Your description of the knight's move ("The Knight's Tour," January/February, page 26) is correct, except that he does not travel on the four squares pictured. He *jumps* from the square he is on direct to his destination. (In England the knight is also called Springer—the German word for jumper.) So without realizing it, you have given us an extra puzzle. If I ever come up with a sequence of words that will use all the letters, Springer-style, I will let you know.

Elizabeth Glenn  
San Francisco, CA

## The Nth Word

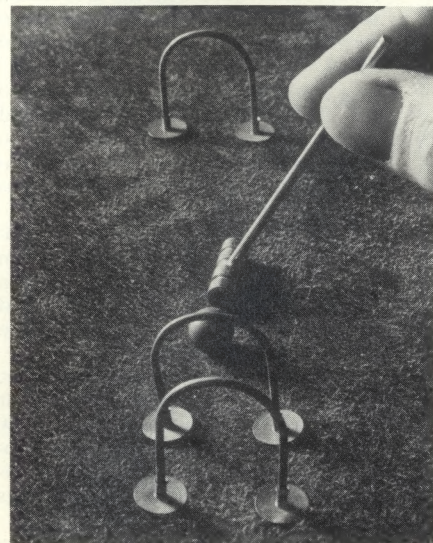
In your January/February issue I especially enjoyed the book reviews (page 58); but I cannot understand how Mr. Manchester left out the most obvious word containing the Threezie NTH. That's the word nth itself!

Paul Morgan  
Tombstone, AZ

## Can You Help?

I recently came upon this miniature brass croquet set (see photo). A few of the pieces are missing, and I would love to find another set but have no idea whether it is still made, and, if so, by whom. Can you or your readers provide any information on this?

Leslie Lynell  
New York, NY





# GAMEBITS



Felberbaum (left) is ready to begin bearing off, while Rubin's trying to roll miracles.

## CATCH-22 IN LAS VEGAS

Mark Twain's observation that the difference between an amateur and a professional is "not only in degree, but in kind" seems to have been turned upside down by recent developments in the world of backgammon.

In terms of prize money, tournament backgammon hardly could have been considered a candidate for the big leagues. Then an amateur named Moshe "Chico" Felberbaum walked off with \$180,400 at the inaugural Amateur Backgammon Championship held last January in Las Vegas.

Felberbaum, a 34-year-old native of Israel who makes his living as a real estate developer in Edmonton, Alberta, chalked it all up to luck, and with good reason. Midway through his semifinal match against California screenwriter Dennis Stone, Chico had been all but written off as his opponent built a seemingly insurmountable lead. But Felberbaum's luck with the dice took a favorable turn and no one was more shocked by his upset victory than Stone.

"I was a sixty to one shot to get into the finals," murmured the stunned dramatist. "I had the opportunity to reach the highest point in my life. Instead, I reached the lowest. Glory was snatched out of my grasp."

Stone, 36, rallied to beat Israeli business student and salesman Simon Naim, 24, of Chicago, to take home a relatively paltry \$18,040 and third place honors. Naim's fourth place showing was worth \$9,020.

In a small, dimly-lit room next door, technicians checked the closed-circuit television equipment that would allow Felberbaum and New Jersey stockbroker Ronald Rubin to play their championship match in quiet surroundings

while hundreds of enthusiastic spectators crowded into an adjacent ballroom to watch the game on a giant screen.

An intense Felberbaum sipped orange juice and smoked 100 mm cigarettes in preparation for the big game while Rubin had problems containing a mild case of the shakes. For Rubin, things seemed to start going downhill from the moment Felberbaum turned down his offer of a Life Saver mint.

But Rubin evidently had become the popular favorite and the crowd groaned with every one of his disastrous dice rolls as tournament co-chairman Paul Magriel, the recent winner of \$58,000 in a professional tourney in Nassau, provided the play-by-play commentary.

Felberbaum took a little more than two hours to cement his 15-6 victory with a final roll of double-five, but the stocky Canadian seemed to lapse into shock as a score of camera shutters clicked and microphones were pushed into his face.

"I was very, very lucky," he said in a near whisper.

When Felberbaum regained his composure he freely admitted that he entered the tournament mainly because of the promise of big money. In fourteen years of casual play, his only other competitive effort was in one of Prince Alexis Obolensky's pioneer promotions, held four years ago.

Rubin couldn't complain too much in defeat. He collected second place money of \$72,160 and picked up another \$18,040 offered as a special bonus to the best early entrant.

"Where's Felberbaum?" shouted someone waiting for the awards ceremony to begin.

"He's in the casino," roared another bystander from across the room.

But Chico simply had lost his way in the crowd en route to the platform to collect the prize from author George Plimpton, whose name adorned the winner's cup, and screen star Lucille Ball, who dropped out of the competition after two victories and a defeat in her third match.

"It was an amazing afternoon," observed Plimpton, who took some teasing from Lucy about his name. "Plimpton . . . Plim-p-ton . . . Plim-P-ton," she cooed. The spectators loved every minute of it.

Less entranced by the celebration were a handful of New York brokers, the tournament backers, who took a financial beating worthy of backgammon's princely origins.

Originally promoted as a "million-dollar" tournament, the event ran into

trouble when entry fees deposited in escrow with the Marine Midland Bank of New York failed to produce a million-dollar pot by the prearranged cut-off date of January 5. But promoters were able to rearrange the escrow deal in a rapid round of negotiations and came up with a \$100,000-prize base to guarantee the integrity of the tournament. By the best estimates, tournament backers ended up losing the bulk of their out-of-pocket expenses, a formidable \$300,000.

Tournament co-chairman Oswald Jacoby didn't seem too worried about the losses, though. Jacoby said promoters were already trying to line up a national sponsor for next year, certain that the earnings of this year's winners would attract an even larger crowd next year.

This year's tally showed 652 players registered in Las Vegas, and the \$400 gleaned from each of their entry fees boosted the overall jackpot to \$360,800, the biggest backgammon prize pool on record. There would have been even more competitors if the January blizzards hadn't grounded dozens of flights in the East and Midwest. Other would-be entrants stayed away because of reports that the tournament had gone bust before it started. (It's difficult to get a bad reputation in Las Vegas, but Arizona travel executive Jules Klar had managed to arouse widespread suspicion over his promotion of another million-dollar tournament and his inability to deliver the promised pool.)

When the winners of even the smaller cash prizes dutifully recited their social security numbers for the Man from the Bank, they suddenly metamorphosed from amateurs—by tournament rules someone who had won less than \$1,000 at backgammon—into instant professionals.

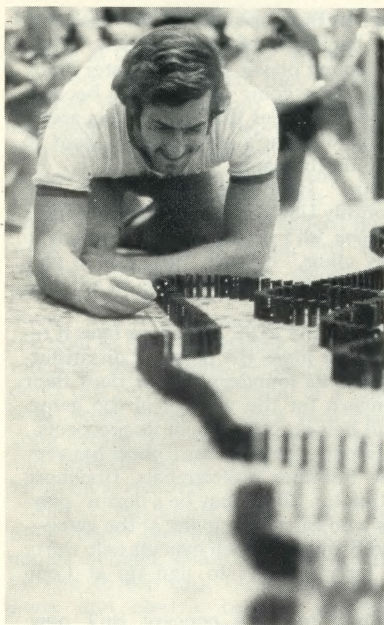
The \$9,020 prize for the best woman competitor was split three ways between Denise Hemingway, Barbara Leiff, and Louise Steinberg. And the happiest player in the house was George Sagarin, a Hollywood, California, resident who at age 69 won a \$9,020 bonus for being the best senior competitor.

"The whole tournament was fun," said Sagarin. "But we went for the vacation, not the money."

George Sagarin won't be back to compete next year and neither will any of the other \$1,000-plus winners. In the emerging business of tournament backgammon, the only amateur players left are the ones who don't win.

—Jack Breger





Brian D. Glicklich

"Domino Wizard" Bob Specia cautiously completes a section of his domino chain. One slip and thousands of dominoes will topple prematurely.

#### DOMINOES: THEORY AND PRACTICE

Dominoes are an ancient game, but their vitality is endless, or so Bob Specia would undoubtedly claim. Specia, an astronomy major at the University of Pennsylvania, holds the world record for domino toppling. He surpassed his earlier mark last October when he leveled 55,555 dominoes at the university. (Patience is definitely a virtue for domino wizards—it took eight days for the dominoes to be set up, but only about twenty minutes for them to fall down.)

No ordinary wood-pusher, Specia eschews "the neat, straight row" and prefers to incorporate elaborate "highlights" into the pattern. These include words or names, figure 8s, stunts in which many rows "peel off" a central line, and aerial stunts like one in which a moving domino strikes a mousetrap, causing another domino to spring into the air.

Does the domino wizard have a goal? Yes, indeed—to set up and knock down 1,111,111 dominoes. He estimates it would take twelve hours a day for three months to set up and six to seven hours to demolish. And he may get there yet, possibly with the help of the National Hemophilia Foundation. Under their auspices, he will begin setting up 111,111 dominoes at the Manhattan Center in New York on May 31, for a big tumble on June 9. For more information, contact the World Domino Spectacular, 104 East 40th Street, Room 506, New York, NY 10016.

The Foundation is considering making this an annual fund-raising event, with Specia increasing his sea of dominoes each year, for perhaps ten years, until he reaches his goal of 1,111,111 dominoes and brings the Domino Decade to a close.

—JJ.

## Evolution of the species.

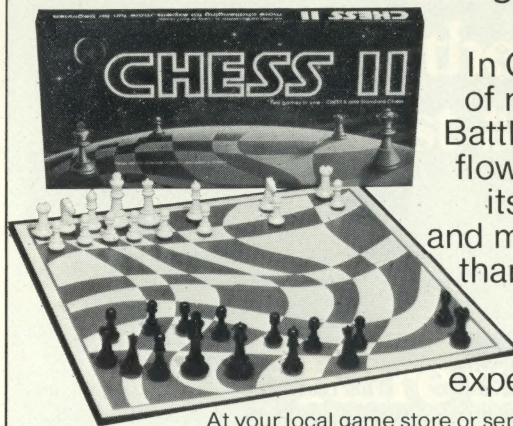
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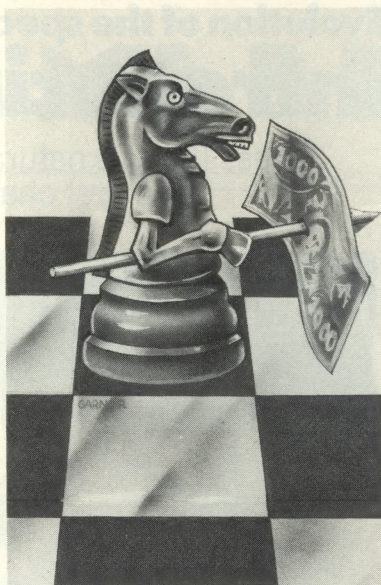
## CHESS PROS JOIN RANKS AT LONE PINE

A mini-revolt that's been brewing in the 45,000-plus member United States Chess Federation (USCF) for nearly a year comes to a head this spring in Lone Pine, California, when some of America's top players hope to form a new organization called the Professional Chessplayers' Association (PCA). At issue are current USCF policies—particularly those spelled with a \$.

USCF directors "certainly don't give masters [top-ranked players, as determined by a complicated rating system] any priority," charges three-time U.S. champion Walter Browne. Between 1972 and 1977, he notes, the Federation spent up to \$100,000 annually to subsidize travel and other expenses incurred by U.S. masters participating in international competition. But last April, "they cut it to zero."

True enough, according to USCF Executive Director Martin Morrison, who concedes that the organization invested "something like half a million dollars" on the masters over a four-year period. But that, he suggests, was indirectly the result of Bobby Fischer's 1972 world title match with Boris Spassky—a showdown that generated nationwide enthusiasm for the game of chess and helped double USCF membership to an all-time high of nearly 60,000. Increased membership meant added income, "most of which," says Morrison, "was spent on master-level programs."

But "when things slowed down, the money was not coming in, and we had to cut back on the budget. The first programs to go were those to do with the masters."



Tracy Garner

The reason? Masters constitute less than a tenth of 1 percent of USCF membership. "Most of our members ... are concerned with the direct services we provide—calculation of ratings, local chess events, and our monthly magazine."

"The question is, will the organization spend a lot of money on the masters—or is it going to feel it's basically an amateur organization [that] should spend its resources on the average player?"

Browne and such other U.S. masters as Larry Evans and former junior world champion William Lombardy, founding members of the PCA, insist that what happens to the masters is of compelling interest to "average player-

ers." In Browne's words, "the master is the backbone of chess, because when the young player sees the master doing well, he's going to want to become good; if he sees that top players aren't doing well, he's not going to want to take up the game."

Burt Hochberg, who edits the monthly USCF-sponsored *Chess Life & Review*, isn't so sure. "Most people who play chess," he says, "just like to play chess. Not everyone wants to emulate some master."

As for the PCA, Hochberg feels it reflects far more the personal dissatisfaction of its founders than it does their concern for the welfare of the game. And he's skeptical about its prospects.

In part, that's because chess has very few full-time professionals. Hochberg estimates "there may be a dozen" players who earn their living at the game—and Browne himself expects only thirty to forty masters to sign up at Lone Pine.

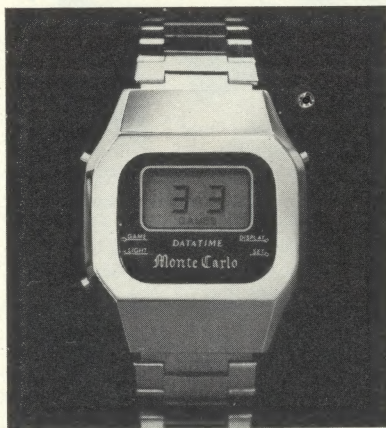
Then too, the concept isn't new. "Emanuel Lasker [world champion from 1894 to 1921] tried to set up an international professional organization," Hochberg points out, "but it didn't work. Chess players have always found it difficult to work together." In fact, "Evans and Lombardy have already had a falling out."

"I'm not against the idea [of a PCA]," he adds quickly. "But I just don't think this one will work."

On this point, Hochberg and Browne again disagree. "I firmly believe," says the reigning U.S. champ, "that the PCA will do for chess what the PGA and ATP did for golf and tennis."

Sooner or later, we'll know.

—Roger Verhulst



Penny Coleman

The Monte Carlo "rolls" a double-three.

## GAME TIME

Time to kill? No problem. Kill, and make a killing while you're at it, with the Monte Carlo, a digital watch that turns your wrist into a gambling table. With a simple push of the game switch, you can select jackpot, dice, or roulette, and a push of the display switch will start the numbers "rolling."

Somewhat like a slot machine, the generator will "spin" and produce three random numbers from 1 to 6. If and when they match, four J's will flash, indicating that you've hit the jackpot. (Unfortunately, no money comes out.) For the dice game, two random numbers between 1 and 6 will appear, so you can "shoot" craps anywhere—and never again have to worry about losing the Monopoly dice. To simulate roulette, the generator will stop the "roll" between 1 and 6, 11 and 16, 21 and 26, or 31 and 36. In all three games, the numbers "spin" rapidly until the display switch is released—they then slow gradually and stop, as in the actual games.

The two silver oxide batteries should last at least a year unless the built-in night light is used excessively (playing the games will not wear them out). The Monte Carlo retails for \$69.95 but is available by mail for \$59.95 plus \$2.50 handling from the Datatime Corporation, 756 North Pastoria Avenue, Sunnyvale, CA 94086. (Availability depends on stock.) Specify gold-tone or silver-tone finish, and allow two weeks for delivery.

—J.J.

## CANGAMES '78

The growing subculture of game players who become absorbed for days on end simulating both the historical conflicts of the past and the fantasy world of the future will gather en masse at a number of conventions this spring and summer. CANGAMES '78, the first of the larger regional conventions, is scheduled for the weekend of May 20. The convention is being organized by John Mansfield, publisher of *Signal*, a bi-weekly gaming newsletter. Held in Ottawa, CANGAMES gives special attention to science fiction and the world of fantasy simulations. Special guests at this year's convention will be Lin Carter, one of the most prolific authors of fantasy and science fiction books, and Jim Dunnegan, president of Simulations Publications, Inc. and the world's foremost creator of war and strategy simulations. Several exhibitors will display their newest games. For further information about the program, write CANGAMES '78, 2091-360 Dundas St., Vanier, Ontario, Canada K1K 5W5. Look for subsequent convention listings in the July/August Gamebits.

—J.G.



## PREVIEW: THE WINNING TOUCH

People in Columbus, Ohio, are watching more television than they used to. Warner Communications is encouraging them with a new two-way TV system called Qube that provides thirty channels of programming, and five buttons. The thirty channels allow home viewers to choose standard network fare as well as opera, first run movies, sporting events, college-at-home, and a local version of "The Gong Show." The five buttons, though, open the door to the broadcasting future. By touching the buttons, Columbus residents can vote on the name of a new baby, order tickets for their vacations, gong contestants on "Talent Search," and criticize Mayor Tom Moody for tardy snow removal.

And ... this spring when "The Winning Touch" premieres on Qube's all-games channel, Qube subscribers will be able to win cars, vacations, televisions, and electric brislers without leaving home. GAMES will be there, touching the right buttons, when "The Winning Touch" debuts.

*Sample Question:* Pictures of President Truman and Bing Crosby flash on screen, "What do these men have in common?"

*Winning Answer:* Same first name, Harry.

Other touching games planned by Qube include "How Do You Like Your Eggs?" based upon how well you know your neighbors (over easy, well done with bacon) and "Charades." It's a new era in television and raises some provocative questions about contemporary communications. Stay tuned as GAMES watches Qube.

—Joe Schick

## NEW GAMES: WORKSHOPS AND TOURNAMENTS

The New Games Foundation will continue their weekend workshops around the country for people who want to explore creating new games and changing old ones. The workshops culminate Sunday afternoons in a New Games Tournament, free to anyone in town who wants to play. For more information on the following schedule, write to the New Games Foundation, P.O. Box 7901, San Francisco, CA 94102.

May 6-7

San Francisco, Detroit, Philadelphia

May 13-14

Seattle, Chicago, New York

May 20-21

Portland, Milwaukee, New York

May 27-28

San Jose, Minneapolis, Boston

June 3-4

Salt Lake City, Des Moines, Albany

June 10-11

Denver, St. Louis, Buffalo

June 17-18

Sacramento, Kansas City, Pittsburgh

June 24-25

Honolulu, Spokane, Omaha

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# Senet

## An Ancient Egyptian Game of Passing Through the Netherworld

by Timothy Kendall



Drawing after a tomb painting of a senet game, from about 2100 B.C., at Meir in Middle Egypt. The hieroglyphic inscription reveals a timeless scene of friendly competition. The man on the left says, "Lo! It's just what I wanted! Now I shall cause you to see my winning it!" But the man on the right says, "You speak in haste! The game is mine." The senet board, and complete rules of play, appear on pages 14 and 15.

As of this May, over three million Americans will have visited the exhibition of fifty-five objects from the tomb of Tutankhamun. The exhibition, now at the midpoint of its nationwide tour, has been hailed as "the most magnificent collection of Egyptian art ever to come to the United States." These treasures have not only brought people to the participating museums in record numbers, but have also influenced fashion, inspired a host of products from jewelry and porcelains to bath towels and rubbing oils, and, in general, have given the country its severest case of "Egyptomania" since the late nineteenth century.

While not even the most phlegmatic among us could fail to be moved by the magnificence of any one of these objects, few of us would appreciate their meaning or specific purpose. Indeed, most of what is displayed has a quality of remote incomprehensibility about it that places Tutankhamun, as it was meant to, in a realm far removed from the rest of humanity, living or dead.

But there is one piece in the exhibition that assures us that the young king (only eighteen or nineteen at the time of his death) did enjoy simple human pleasures like the rest of us. This object is the king's elegant gaming box. Perched atop a sled

and four exquisitely carved lion's legs of ebony, its top and bottom are inlaid with ivory squares for two different board games; inside, a drawer contained the golden playing pieces, all lost to the robbers who hastily looted the tomb in antiquity.

Today, happily, there is enough information about one of these games to allow a plausible reconstruction of its rules. In fact, if the quantity of evidence available to us is any indication of the game's popularity, it must have been as characteristic a feature of ancient life along the Nile as the river itself. Its name? The Egyptians called it *senet*, the game of "passing."



In Tutankhamun's time (he ruled from about 1334 to 1325 B.C.), *senet* was already of extreme antiquity. The earliest known *senet* board, made of sun-dried mud, was found in a grave near Abydos in middle Egypt, datable to about 3500 B.C. Probably because of the tenacious conservatism of the ancient Egyptians, and the reverent regard with which they held everything handed down to them from the distant past, *senet* managed to survive in essentially its original form until late Roman times, when, with the establishment of Christianity, it dropped from sight. There is good reason to believe, however, that it never quite died out but simply changed to suit Christian, and later, Islamic tastes, for today in Egypt and the Sudan one may still observe rural people playing a game curiously similar to *senet*.

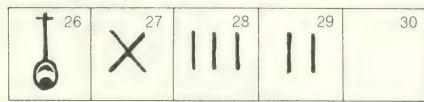
A game for two people, *senet* was played upon a board surface marked with thirty squares, called "houses," arranged in three parallel rows of ten squares each. Each player was allotted an equal number of playing pieces, called "dancers," the opposing sides being distinguished by their different size, shape, or color. The number of pieces in each camp seems not to have mattered much so long as both sides had the same number, but seven on each side seems to have been preferred.

The opponents determined the movement of their pieces on the board by throws of specially flattened sticks, usually four in number. An early precursor of dice, these throw-sticks seem to have been called "fingers." Some sets of throw-sticks which have survived, like those associated with Tutankhamun's large set, are even carved so that the ends resemble fingertips complete with nails!

To each player the board surface represented a pathway shaped like a backwards S. The starting point lay at the lower right corner of the board (as the player faced it) and the end point at the upper left. One player, whom we shall designate as A, moved his pieces along this path from square 1 to square 30 (see numbered squares on the board on pages 14 and 15), while the other, B, progressed from square 30 to square 1. Each player, while attempting to advance his pieces along the prescribed route toward a safe removal from the board, sought at the same time to capture the pieces of his opponent coming from the opposite direction, and thus prevent their attaining the same goal of completion. Originally the winner of the game was probably thought to be whoever had brought the greater number of pieces successfully through the thirty squares.

Though it is apparent from many surviving *senet* boards that the game could be played on a simple unadorned grid of thirty squares, it seems that at an early date some special significance had been given the five end squares (26-30), for on most boards these squares are marked

with signs or numbers that clearly had some bearing on the play. On an illustrated board from about 1500 B.C. (below), square 26 is marked with a hieroglyph meaning "good" (as well as "beautiful" or perhaps "good fortune"). Square 27 is inscribed ominously X, a hieroglyph indicating "difficulties" or "encounters." The next two squares bear the numerals 3 and 2 respectively, while square 30, often left blank, occasionally bears the numeral 1.



Detail from a *senet* board, ca. 1500 B.C. (Brooklyn Museum)

During or shortly after Tutankhamun's reign, some *senet* boards even began to display figures of gods and divine symbols in these squares. These motifs, though at first merely decorative, soon began to recall in the Egyptian mind some specific religious, particularly funerary, notions. On a *senet* board from the early thirteenth century B.C. (below), the 27th (or "difficulties") square is inscribed with an image of the Nile god, not only indicating a water obstacle, but specifically symbolizing the river. Particularly interesting is



Detail from a *senet* board, ca. 1200 B.C. (Private Collection)

square 26, which bears the image of Osiris, god of the dead, sitting before a hieroglyphic combination meaning "beautiful house" (probably a lucky square for Player A near the end of his course). This same name, "beautiful house," was what the Egyptians also called the place of embalming and mummification. Doubtless square 26 and the funeral parlor were seen symbolically as one and the same. (A *senet* board in the Walters Gallery in Baltimore even depicts in this square a recumbent mummy on a bed.) Apparently the "good fortune" now to be achieved by Player A was mummification and a good burial! The 27th (or "water") square would thus seem to have been symbolic of that final earthly journey when the mummy was borne by relatives and friends in a splendid funeral procession to the river and ferried across to its tomb on the west bank. The last three squares, adorned with images of the gods, no doubt represented the final victory of the deceased in attaining immortality as he joined the gods after burial.

As such patterns evolved on these last five squares, *senet* rapidly acquired a complex mythological and religious significance that it had not had before. Eventually, sometime during the thirteenth century B.C., the game was conceptualized as a funerary allegory, a metaphor of one's journey, after death,

through the underworld. The encounters of Player A with his opponent were seen as the encounters of his soul with the evil or inimical forces that lurked in the nether regions, and the victory of Player A was seen as his attainment of the happy afterlife. Now, more than ever, *senet* sets were buried with the dead—not only for their amusement in the afterlife but, more importantly perhaps, as symbols of their fate and the arduous road to eternal life that was thought to lie before them.

The Egyptians believed that once a dead person was preserved from decay by mummification and provided with a tomb, his *ba* or "soul" passed, like the setting sun, through an entrance in the western desert into the realm of the dead—a strange, terrifying twilight zone known as the *duat*. Once there, the deceased had to undertake a difficult journey that would lead him to the judgment hall of Osiris, lord of the dead, the only place where he could hope to find safety and ultimate happiness—but only if he had lived a just and blameless life. The route that led to this so-called "Hall of the Two Truths," however, inevitably took him past a host of hideous, evil creatures and angry gods, all eager to destroy him or to impede his progress.

Once in the awesome presence of the great god and his divine retinue, the deceased had to prove that he had led a life free from sin. His heart was surrendered and weighed upon a balance against a "feather of truth." If the heart did not balance the feather it was at once thrown as food to a crocodile-headed monster named "devouress." Thus the soul perished ignominiously, and the deceased suffered a second, permanent death, without redemption. If the heart did balance the feather, it was adjudged to be pure, and the dead person was said to have become "justified." Osiris then absorbed the deceased into his own body and he became as one with the god. Now the dead person *was* Osiris, and the soul of his earthly body was given the ability to "go forth by day" onto the earth again, an honored traveler with the other gods on the great ship of the sun god as it rose in the east at dawn. Every day until the end of time the *ba* could return to its tomb to inhabit its mummy if it wished, or it could roam freely outside the tomb, assuming any form of existence that pleased it. Always at nightfall, however, it had to rejoin the sun ship when it set in the west, and, like the other gods, reënter the netherworld in order to fight the enemies of Osiris and the collective "powers of darkness" so as to achieve the cyclical rebirth and new life of each new day.

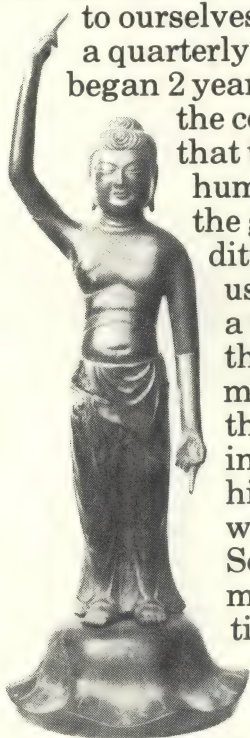
The game of *senet* first appears as a definite allusion to this myth in the seventeenth chapter of the Book of the Dead. The deceased is shown seated before a gaming table, playing by himself, symbolic perhaps of his lonely encounter



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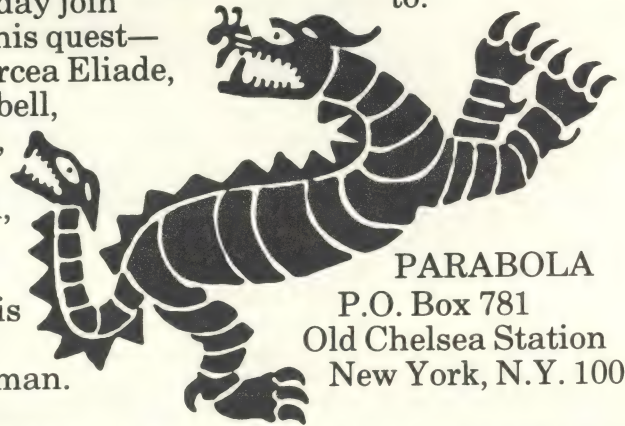


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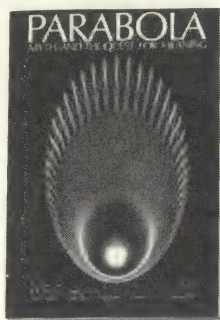
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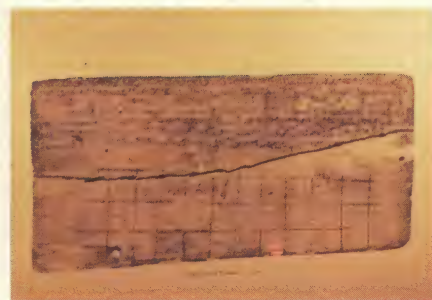
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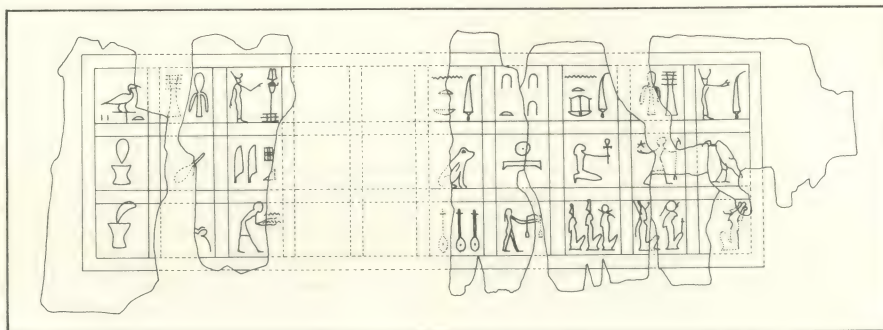
with death in the unknown. The opening sentence explains the chapter as a spell for "going forth by day, assuming whatever form he wishes, playing senet, sitting in the pavilion, and coming forth as a living *ba* after he dies."

Certainly by 1200 B.C. this once simple game had become thoroughly infused with these popular funerary beliefs. Senet was now played upon a board in which all the squares were inscribed with special signs: figures of gods, names of festivals, amuletic symbols of one sort or another, all thought to be efficacious to the deceased in his journey through the netherworld. While these symbols seem to have had no effect on the play of the game, serving only as decoration, they did add an undeniable element of mystery. Of the four known surviving examples of this type of senet board, the two most complete survive only as drawings on a papyrus in the Museo Egizio in Turin, Italy (see illustration at right), which have served as the basis for our modern reconstruction. Unfortunately, even the Turin boards are fragmentary, and the designs in seven squares across the middle are either missing or incomplete owing to an ancient break in the papyrus. But several of these squares can still be identified with reasonable certainty through the curious inscriptions that a few people, probably the most avid devotees of senet, had inscribed in their tombs. These odd documents actually describe senet games in progress, but couched in funerary terms. Here the struggle between the dead person and his enemies in the netherworld is described as taking place on a senet board like the one in Turin, and some of the unknown squares are named or alluded to. These texts provide us with a rare glimpse of the game in play and furnish clues to the rules that could not otherwise be deduced. These have been the principal sources used not only in completing the entire board surface, but also in reconstructing the rules of the game.

Actually playing this ancient game, and attempting to understand its complex mythological framework, evokes a strong sense of the mystery of the religious and funerary beliefs of the people that developed it, beliefs which they themselves took seriously enough in life, yet in the context of a board game enjoyed as pure amusement. It is hoped that the sophisticated games enthusiast of the present, playing senet again nearly two thousand years after it was last known to have been played, may find it as pleasurable as did an ancient priest of Thoth named Petosiris. In his tomb of the fourth century B.C. near Ashmunein in Middle Egypt, above a scene of himself seated before a senet game with a companion, it is referred to as "a delighting of the heart at play with his friends after lunch until the moment comes when he refreshes himself in the beer room."



Left: A thirty-square board from 3500 B.C., found in an Egyptian grave, indicates that senet may be the world's oldest documentable board game. Right: A senet board inscribed on a school-boy's writing tablet. (Cairo Museum)



A funerary senet board, partially preserved on a papyrus in the Museo Egizio, Turin, Italy. The goal of the players was apparently a safe passage through the netherworld and the attainment of the happy afterlife. The restoration of the modern board has been based largely on these fragments. (Redrawn from a photograph.)



Ani and his wife seated before a senet game. The unseen opponent is Fate, indicating that the game is played after death in the hopes of achieving the Egyptian concept of Paradise: the ability "to go forth by day [onto the earth again] as a living soul and to assume any form of existence that pleases them [here shown as human-headed birds]." The scene is from their Book of the Dead (13th Century B.C.), now in the British Museum.



Left: The ivory and ebony game table, the largest of four sets found in Tutankhamun's tomb. (Cairo Museum, photograph by Lee Boltin.) Right: A selection of ancient Egyptian senet pieces from various periods.



# How to Play the Ancient Game of Senet

**The situation implicit in the game.** In the funerary version of senet, Player A, progressing from square 1 to square 30, is considered to be the *ba* or soul of his own deceased body. Each of his seven pieces enters the netherworld at square 1, hoping to gain succor and luck from the amuletic signs, festivals, gods, etc. on the first twenty-five squares of the board. If he can reach it, he must stop at square 26, for it symbolizes the mummification of his earthly body, and is his prerequisite first step toward eternal life. Only after having placed a piece on "The Beautiful House" does Player A have the right to ferry it across the waters (square 27) to his second goal, a good burial, and judgment in the houses of the gods (squares 28–30). If at this point his piece is not devoured by Player B, and he moves it triumphantly from the board surface at square 30, he is thought to have come forth upon the earth again as a living soul, having achieved eternal life.

The goal of Player A is usually far from easy, for thwarting him at every turn is Player B. His pieces, progressing from square 30 to square 1, represent the collective powers of darkness. These include the host of hideous spirits and minor deities inhabiting the netherworld whose only duty is to devour the souls of any who have led sinful lives. Lurking in the dark-

ness of the nether regions is also the rebel god Seth and his cohorts, those wagers of war against truth, order, justice, and righteousness, the enemies of Osiris and all the justified dead. Whatever the precise identity of Player B, his only objective is the utter destruction of Player A and the seven bearers of his soul.

**Determining moves.** The game is traditionally played with four sticks, white on one side and dark on the other, which are thrown together in the air. The movement of a playing piece is determined by the number of white sides facing up (1, 2, 3, or 4) although if a player throws so that all four dark sides face up, he is entitled to move a piece five spaces. A throw of 1, 4, or 5 enables a player to throw again, but after a throw of 2 or 3, it is the other player's turn. A throw of 2 is the most easily obtained; throws of 1 and 3 are less common; throws of 4 and 5, the most difficult to obtain.

**Equipment.** You can fashion throw-sticks by painting five-inch long pieces of scrap wood; or improvise by using the black and white sides of Othello pieces, or (somewhat more difficult to read) the heads and tails of four like coins. Four cube dice can also be used, with even numbers representing white, and odd numbers black, so that the probabilities of the various moves will be preserved.

For playing pieces, use two different kinds of stones, beans, coins, checkers, etc. (seven of each kind).

Paper and pencil will be useful for keeping track of repeated throws, allowed as described above.

**Commencing play, moving the pieces, and seizing an opponent.** To begin the game the players alternately throw the sticks. A player may not put a piece into play on the board until he first throws a 1, whereupon he puts his piece on his first square (Player A on square 1, Player B on square 30). He then throws again, being entitled to a second throw following a 1, and he moves his piece as far as his throws enable him to move it. A player, it will be remembered, may throw again and again until he throws a 2 or 3. Generally, whenever a 1 is thrown and a player still has pieces not yet put into play, it is to his advantage to put them into play, for only fate determines the frequency of a throw of 1. A player may not put a new piece on the board, however, if his first square is already occupied by one of his own.

A player generally completes the full number of throws allowed him on a single turn before moving any one of his pieces. Then, for any throw of the sticks, he may move any one of his pieces that he wishes, but he must move that piece the full number of spaces pre-



1. House of Thoth



2. House of Setting up the Djed and the Tiyt



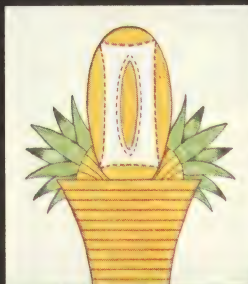
3. House of Neith



4. Unknown House



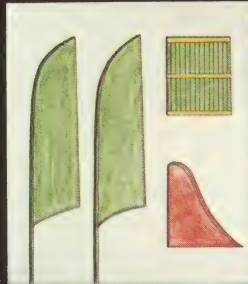
5. House of Ma'at



11. House of Mūt



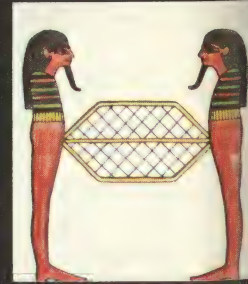
12. House of Orion



13. House of Life



14. House of Passing with the Sun



15. House of Repeating Life



21. House of the Ba



22. House of Spitting



23. House of Cool Waters



24. House of the Towrope



25. House of the Papyrus Thicket



scribed by that throw. If, for example, a player throws a 4, a 1, and finally a 2, he may move any one piece by all of these throws in any order, or he may move three pieces by each of these throws in any order, or he may move one piece by one of the throws and a second piece by the other two, etc.

A player progresses in a forward direction only, and he may move a piece forward only onto an empty square or onto one occupied by an opposing piece. He may pass his own or his opponent's pieces, only makes it more difficult for Player A to achieve his goal.

As each player moves his pieces closer to those of his opponent, he attempts to manipulate them so that they will land on the squares occupied by his opponent. A space so seized enables the capturing player to take his opponent's piece and remove it permanently from the board. By such means Player A reduces his antagonist's strength, thereby increasing his chances of eventually getting his own pieces safely off the board; Player B, in capturing his opponent's pieces, only makes it more difficult for Player A to achieve his goal.

**Winning the game.** If the adversaries decide to play only one round, Player A wins if he succeeds in getting one of his seven pieces safely through the thirty squares, while Player

B wins if he manages to annihilate all of Player A's pieces. If two rounds are played (a more interesting game in which the players alternate roles), the victor is the one who as Player A is able to remove the greater number of his own pieces safely from the board.

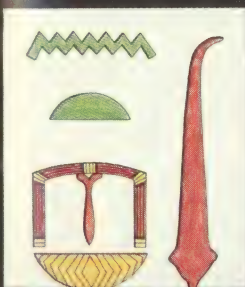
Since the two players have different goals, their play is governed by slightly different rules. Player A, after traversing the first twenty-five squares, must place each piece on square 26 by an exact count before progressing further. His primary object now is to move that piece from the board by an exact count, in one or, at most, two moves. If he throws a 5, his piece is triumphantly transported from the board. But if he throws a 4, 3, 2, or 1, he must move the piece from square 26 (rather than moving another piece on the board, and before taking a second throw if one is allowed) to square 30, 29, 28, or 27 respectively, there to remain until a throw is obtained that allows him to exit by an exact count. The water square (27) is the most dreaded, for it requires a throw of 4 (the most difficult to obtain) before the piece can be moved safely off the board. When a player cannot move a piece from the last four squares by a given throw, he may move another piece by that throw; and he is still entitled to an extra throw following throws of 1, 4, or 5, but only after he has moved a

piece in accordance with the first throw.

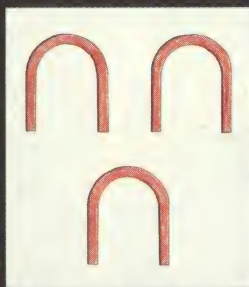
If the longer, two-round game is played, the safe removal of a piece from the board automatically entitles Player A to place a new piece on the board at square 1, if he still has a piece not yet put into play. And if the former piece is removed from the board by a throw of 1, 4, or 5, any piece on the board may also be moved by the permitted second throw.

In contrast to Player A, Player B has a purely defensive role. His sole objective is to destroy all of A's pieces before they reach safety. Should he manage to carry a piece safely off the board by an exact count, he may bring it back to the beginning again and place it on square 30 if that square is not already occupied by one of his own pieces. If the square is occupied, the piece must wait off the board, like the others, until a 1 is thrown. □

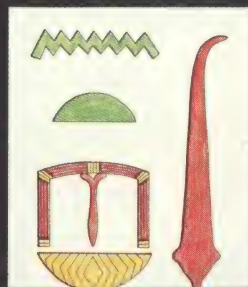
*Timothy Kendall is a curatorial assistant in the Department of Egyptian Art, Museum of Fine Arts, Boston. His reconstruction of senet will soon be published by The Kirk Game Company. It includes a cardboard game surface, fourteen playing pieces, and four throw-sticks, all modeled after Egyptian originals. A 40-page booklet includes detailed explanations of the history of the game and the symbols on the board. The set can be ordered directly from Kirk, P.O. Box 478, Belmont, Massachusetts 02178. The cost is \$15 (plus \$2 postage and handling).*



6. First House of Tenet



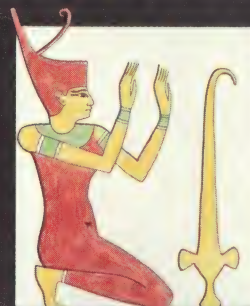
7. House of the Thirty



8. Second House of Tenet



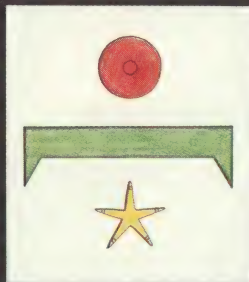
9. House of Setting up the Tyt and the Djed



10. House of Wadjet



16. House of the Net



17. House of the Netting Implements



18. House of following Osiris in Ro-Peker



19. House of the Steering Oar



20. House of Bread



26. Beautiful House



27. House of the Waters



28. Hall of the Two Truths



29. House of Atum and Re



30. House of Horus



If you think of stilts only as a child's plaything, or as part of a carnival costume, you haven't considered all the possibilities. Some painters and electricians say they have more mobility on stilts than on ladders—not to mention the time saved. (One man figured he saved a half a mile a day of climbing up and down ladders.) Commercial fruitgrowers have used stilts for pruning and harvesting. Stilts added an interesting twist to races and contests in the

# Step up to Stilts

by Ted Kaufmann

Napoleonic era, and today, in Java, children on stilts bob for cakes and candies hung from a cord. There are as many ways to make stilts as there are ways to use them. Most methods (like the one described on page 17) are simple, and you may find that making stilts is easier than learning to walk on them. To step up, lean with your back against a wall, and take your first steps on a lawn or some other soft surface. Careful: It can be a long way from up there to down here.



Masked dancers on stilts portray deities, demons, and spirits in African rituals. Above, dancers of the Dan Tribe.





The shepherds of Les Landes, in southwestern France, use stilts to oversee their flocks grazing in the marshy grasses.



A workman who installs insulation in Detroit says that stilts save time, shoe leather, and the trouble of building scaffolds. He claims to have worked for eight years without an accident.



Sam Kerson and the Dragon Dance Performers entertain on village greens throughout New England. Above, a lady magician and a juggling clown perform a magic dance to hypnotize a man-eating dragon (see far right).

# How to Make Stilts

## Materials and Equipment

Two 2x3 spruce or cedar boards (for length, see below)  
Two 3x3 hardwood blocks (6 inches long)  
Eight #12 wood screws (3 inches long)  
Power drill with 3/16-inch bit  
Screwdriver  
Sandpaper  
White glue  
Paint or wood stain (optional)

## Instructions

First, decide on the desired elevation from the ground (*a* on the diagram below). If you've never been on stilts before, 18 to 24 inches high is about right.

To determine what length the boards should be, measure from the bottom of your foot to just above your shoulder (*b* on the diagram) and add this figure to your "desired elevation."

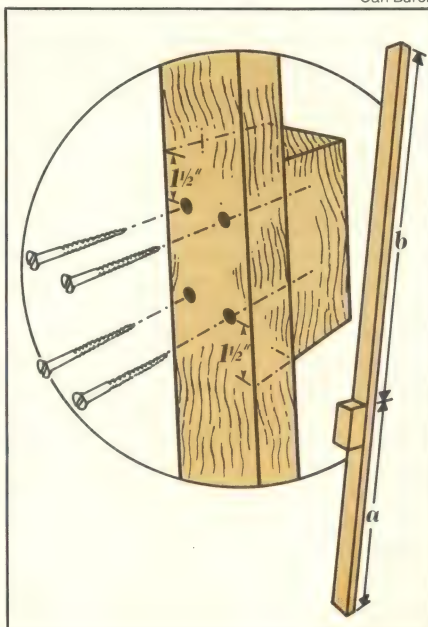
The two 3x3-inch blocks (the foot supports) are attached to the boards lengthwise so that there are no protruding edges. Measure and mark, at identical heights on the two boards, the positions for the top and bottom of the foot blocks. Mark the locations for four holes on each board 1½ inches from the top and bottom of the foot-block positions and ¾ inch from the sides (see detail in the diagram below). Glue the blocks in place on the boards, and let dry.

At the points marked, drill holes through the boards and 1 inch into the blocks. Fasten with wood screws. Test each stilt thoroughly to make sure it will support your weight.

Finally, sand the rough edges and, if you like, stain the finished stilts, or decorate them to your taste. □

*Ted Kaufmann is a semi-retired ad man and a part-time dowser.*

Carl Burch



On the Ryukyu Islands southwest of Japan, when the channel is too shallow for boats children wade to school on stilts.



A fan in Yankee Stadium, watching the 1947 World Series between the Dodgers and the Yankees, makes the most of a standing-room ticket. (The Yankees won the Series, 4-3.)



Sam Kerson with his dragon, back at the lair after the performance. The entertainers tie the stilts around their legs so that their hands remain free. Kerson says a haystack is a useful fallback when you're learning to walk on stilts.



**T**here are a great many games that call for deductive reasoning—where players are given clues and, in accordance with a set of rules, put them together to arrive at a preset solution. Among current best sellers, Master Mind is a prime example. There are, on the contrary, very few games based on inductive reasoning—where players “conduct experiments” in an effort to *discover* rules. And if it weren’t for Bob Abbott, the inventor of Eleusis, there probably would be none.

Martin Gardner introduced Eleusis to his *Scientific American* readers in June of 1959. It stimulated great interest in the scientific and educational communities, and that interest has never died out.

Eleusis, named for the ancient Greek Eleusinian Mysteries, was conceived in 1956 while Bob was in college. The basic idea is brilliantly simple. One player—originally called the dealer, but later elevated to “Nature” or, among some players, “God”—devises a secret rule that specifies whether or not a particular card can be added to a line of face-up cards. Each of the other players in turn offers a card from his hand. If the card is in agreement with the rule, the dealer adds it to the line; if not, the player leaves it face up before him as a “mistake” card. By studying the pattern of cards accepted, and those rejected, players attempt to determine the secret rule. This can be a slow process of trial and error, or can come in a sudden flash of intuition.

My wife and I met Bob in 1963 and found it quite fitting that he had created a game in which players make up their own rules. In his personal life he insists on the same privilege. At that time he earned his living as a typist, working by the hour, and only enough hours for the bare necessities. The remaining time he devoted to worthwhile pursuits—primarily games. His attire was also unique. On winter visits he would peel off layer after layer of assorted clothing, including a second pair of pants, but a knitted cap remained on his head the entire evening.

His apartment in Manhattan’s East Village had a nostalgic charm, with the bathtub in the kitchen and community toilet off the outside hallway. Now Bob has found a successful career as a computer programmer and has moved to posher surroundings. But he still plays according to his own rules.

Back in 1963 and the years following I had the pleasure of playing Eleusis a dozen or more times. But there were two flaws in the game that bothered all of us. One was the difficulty of remembering *when* a particular “mistake” card had been played. The other was the situation where a player might have a good idea of the dealer’s rule but, when his turn came, had no cards in his hand that were playable under the rule.

Actually the first of these problems had already been solved. In December of

# Eleusis

## The Game With the Secret Rule

by Sid Sackson

1962 Martin D. Kruskal, a mathematical physicist at Princeton University, published a variation of Eleusis called Delphi. In his variation he came up with the concept of a “mainline” and “sidelines” (which will be explained shortly).

Solving the second problem proved to be much more difficult. I was in on some of Bob’s earlier experiments, though as the years moved along the pressure of other work caused me to lose touch. It was therefore a pleasant surprise to find Bob’s booklet on the “New Eleusis” in my mail one morning last September, closely followed by Martin Gardner’s account of it in the October *Scientific American*.

So here, with one nonessential and optional exception to be noted at the end, are the latest rules for playing Eleusis.

**Number of players:** From three to eight can play. In each round, one player is the dealer, who devises the secret rule. Usually this honor goes to a volunteer who thinks he has an interesting one. But no player can be dealer twice during a game. If time permits, a full game consists of each player being dealer for one round; but when some players don’t get the opportunity, there are provisions for scoring an abbreviated game. When playing for blood, players draw cards for the order in which they become dealer.

**The cards:** Generally two 52-card decks shuffled together are sufficient. But keep a third deck on hand to use if you get down to four cards or less. Once the third deck is shuffled in, don’t bother removing it. Since the layout can become quite extensive, miniature cards are a good idea. Lacking these, you will probably have to place the layout on the floor.

**Object:** Basically the idea is to get rid of your cards as quickly as possible by playing them to a layout in accordance with the secret rule. The closer you get to determining the rule, the better you will be able to play, but discovering the rule is not in itself the objective.

**The secret rule:** The dealer devises a rule stating when a card can be correctly added to the mainline (see sample layout), and when it is incorrect and must be placed in a sideline. Following are a few examples of secret rules. (The term “last card” refers to the most recently played card in the mainline, or to the “starter” card before any cards have been accepted. When a numerical value is involved, an ace is usually 1, jack is 11, queen is 12, and king is 13.)

“If the last card is black, play a 7 or higher. If the last card is red, play a 6 or lower.” (This is the rule in the example.)

“If the last card is a spade, play a diamond; if a diamond, play a club; if a club, play a heart; if a heart, play a spade.”

“If the sum of the last two cards is even, play a red card. If the sum of the last two cards is odd, play a black card. Any card can be played on the starter card.”

The secret rule should depend only upon the cards in the mainline. In no case can it involve external features, such as the player’s sex, the hand he uses, his position in the rotation, etc.

(In order to end up with a good score, a dealer should try for a rule that some players will get quickly while others have difficulties. But the dealer should be careful not to underestimate the difficulty of his rule. Somehow it always looks easier from his point of view.)

The dealer writes the rule on a sheet of paper, to refer to if necessary as the game progresses, and to document his decisions when the round is finished. Before play begins, the dealer may, if he wishes, give a hint concerning the rule. This could be something like “Suits are not involved,” “The rule involves the last two cards in the mainline,” etc. Once play begins the dealer may not give any help.

**The deal:** The dealer deals fourteen cards to each of the other players and none to himself. He then turns a starter card face up. To determine the first player, the dealer starts counting to his left and continues (excluding himself) until he reaches the number on the starter card. Play rotates to the left.

If the dealer turns a starter card that is not acceptable under his secret rule, he shuffles it into the deck and turns up another. The first player, however, is determined by the original starter card.

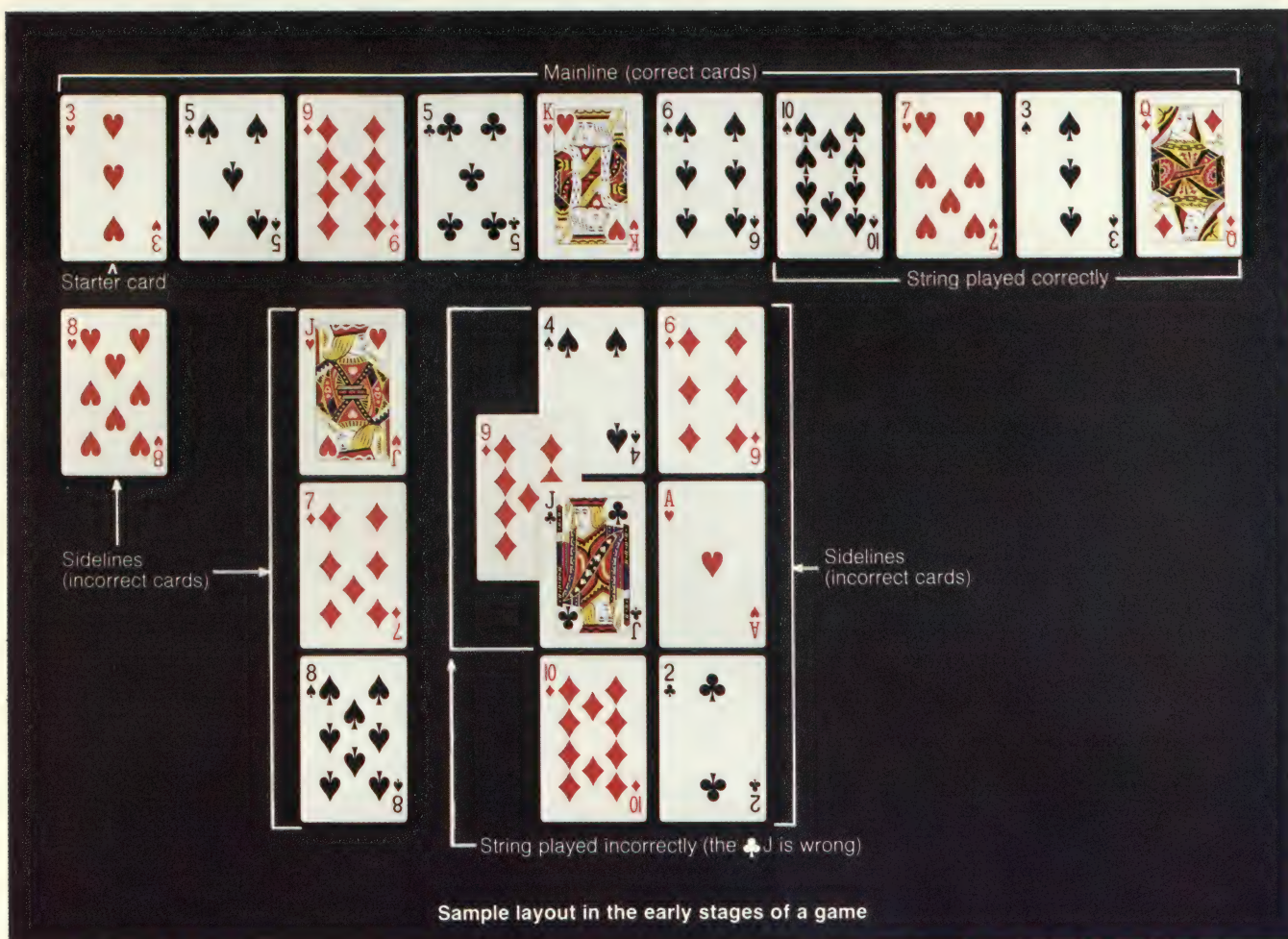
**The play:** In his turn, a player must play one card, play a string of cards, or declare that he has no play.

**Playing one card:** The player takes the card from his hand and shows it to the dealer. If the card is correct, it is placed to the right of the last card in the mainline. If it is incorrect, it is placed below the last card played—either starting or continuing a sideline. When a player is incorrect, the dealer gives him two cards from the deck to add to his hand. A correct play reduces the hand by one card; an incorrect play increases it by one.

(In the sample layout, the first player tries to play the ♡8 and is incorrect. He is dealt two cards. The second player tries the ♠5 and is correct. The play of the ♦9 by the next player is also correct, but the next three turns—♡J, ♦7, and ♠8—fail to meet the rule, and are placed one below the other in a sideline.)

**Playing a string of cards:** A player who thinks he has discovered the rule may attempt to play a string of two, three, or





Sample layout in the early stages of a game

four cards. These are shown to the dealer overlapped slightly so that their order is indicated. If each individual card would be correct if played by itself, the string is correct and is added to the mainline with no overlapping. (In the sample layout, the last four cards were correctly played as a string.) If one or more cards in the string are incorrect, the entire string is placed in a sideline, maintaining the overlapping to indicate for future reference that they were played as a string. The dealer does not state which cards are wrong. When a player plays an incorrect string, the dealer gives him twice as many cards from the deck as there were in the string.

(In the sample layout, a player mistakenly surmises that the secret rule calls for suits to be played in the order heart, spade, diamond, club, heart, etc.—the second rule in the examples given on the previous page—and plays a string of three cards. Since the ♣J is wrong under the rule actually used, the string is placed in a sideline and the player receives six cards from the dealer.)

**Declaring no play:** When a player feels that he knows the rule but has no card in his hand that he can play correctly, he is permitted to declare "No play." He exposes his hand for the dealer to check. If he indeed has no correct card, the dealer takes his hand, counts the cards, and places them at the bottom of the deck.

He then deals the player a hand of four fewer cards than he originally held. If his original holdings were four or fewer than four, the round is ended.

If the dealer finds one or more correct cards, he chooses any one of these and places it on the mainline. The player picks up the rest of the hand and is dealt another five cards as a penalty.

**Expulsion:** After thirty cards have been played to the layout—either to the mainline or the sidelines—a player who plays an incorrect card, plays an incorrect string, or mistakenly declares no play is expelled for the remainder of the round. He is given the penalty cards for his incorrect play and keeps his hand to be scored at the end of the round.

To keep track of the number of cards played, it is useful to place a marker of some kind on every tenth card. (In the sample layout such markers would be placed on the ♠4 and the ♠3.)

If all except one player have been expelled, that player continues until either he plays out all his cards or he himself makes a mistake.

**Scoring:** A round ends when one player gets rid of all his cards, or when all the players have been expelled. At this time each player counts his remaining cards and the score is determined as follows:

Each player scores the difference between the number of his cards and those held by the player with the most cards. If

a player has no cards left, he receives an additional bonus of four points. The dealer scores the same as the highest scoring player. (As an example, at the end of a round four players hold the following numbers of cards: 17, 17, 5, and 0. Each player with 17 cards scores zero, the player with 5 cards scores twelve, and the player with 0 cards scores seventeen points plus four points bonus, for a total of twenty-one points. And the dealer also scores twenty-one points.)

If a game is ended before all players have had a chance to be the dealer, each player who has not been the dealer adds ten points to his score as compensation.

So now you know everything about Eleusis, except how to become a Prophet. After you have played awhile you will undoubtedly find yourself discovering the secret rule before the other mortals. To lord it over them, you can declare yourself a Prophet. If you are right, your score goes way up; if you are wrong you will be overthrown and suffer the consequences. To find out how it all works—and it is a little complicated—send \$1.00 for a booklet with the complete rules for "The New Eleusis" to Robert Abbott, Box 1175, GPO, New York, NY 10001. □

*Contributing editor Sid Sackson is a game inventor and game collector. His published games include The Winning Ticket, Acquire, and Sleuth. His books include A Gamut of Games, Beyond Tic Tac Toe, and Beyond Competition.*



# Mappit Capitol Punishment

by John B. Miller  
photos by Penny Coleman

Some new kind of sadistic puzzle? It all depends on your point of view. Each of the five groups of photographs below was taken from a different location in Washington, D.C. The challenge is to pinpoint those five locations (i.e., the five spots where the photographer stood) on the map below.

In some cases it may be helpful to refer to architectural and other details shown on the map; or to study the relationship of objects in the foreground of a photograph to those in the background; or to represent the photographer's viewing angle by drawing a line across the

map—the clear intersection of three such lines is just the kind of hard evidence you might be looking for.

The photographer has deliberately tried to trick you by using an occasional telephoto or fisheye lens, by taking advantage of changing light, pivoting as much as 180 degrees between shots, etc., but she has also been sporting enough to provide many clues via her selection and treatment of the sights. On that score, the pictures will have to speak for themselves. *Answer Drawer, page 62* □







Position 1



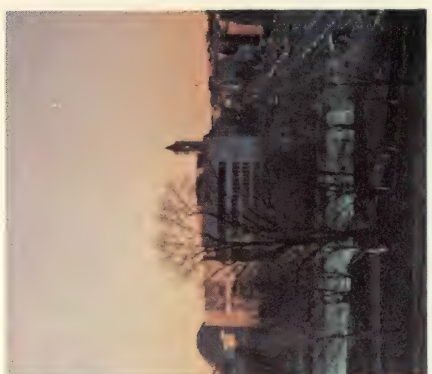
Position 2



Position 3



Position 4



Position 5





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# John Hancock

## Handwriting Identification Quiz

The scribbles you see below are the signatures of ten well-known people. Can you discover who they are? (Hint: None of them are alive today.) Six correct is a good score; nine correct makes you a super-sleuth.

Answer Drawer, page 60

1. COMPOSER

6. CONDUCTOR

2. NOVELIST

7. PRESIDENT

3. EMPEROR

8. POET

4. DICTATOR

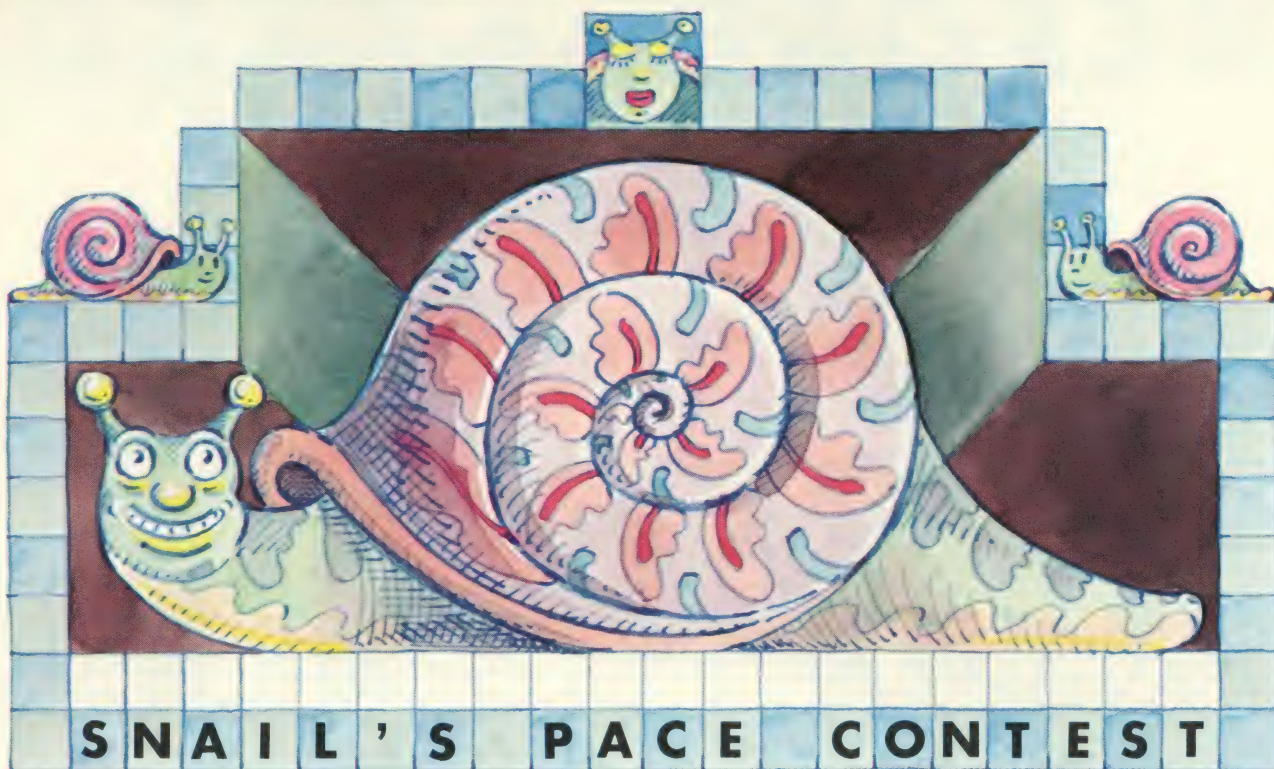
9. MADMAN

5. QUEEN

10. ARTIST

©1968 Charles Hamilton, manuscript dealer, in *Scribblers & Scoundrels* (Paul S. Eriksson, Inc.).





Tim Lewis

**First Prize:** Year's supply of snails (over 365 escargots).

**Second through Fifth Prizes:** A GAMES T-Shirt.

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#### How to play:

1. Begin by writing any legal word (see rule #6) beneath the snail illustration in as many spaces as needed, starting from the left, of course, and reading to the right. Example: S T A R T.
2. To form your next word, you must *drop at least one letter* from your previous word and *add at least one letter* to form your new word. The example continues: (S T) A R T F U L. We have dropped the S T from START and added F U L to form ARTFUL.
3. Continue in this manner until all twenty white spaces have been filled in beneath the illustration of the snail. Your final word must end on the twentieth space.
4. Write on the entry blank all the words you have used and total up all the letters those words comprise. In the example given above, only the words START and ARTFUL may be entered in the word list. Coincidental words such as TART and ART may not be counted since they do not comply with rule 2. Your completed word list needn't fill all nineteen blank lines but cannot legally be any longer than this. The lowest possible score is 20. Theoretically the maximum score is 110, but we doubt anyone will come remotely close to that figure. After an hour of Snail's Pace we recorded scores in the 40s.
5. Your strategy should be to drop as few letters as possible from your previous word, to add as few letters as possible in forming your new word, and at the same time, attempt to use the *longest* possible words. For instance, the maximum score of 110 can only be achieved by forming 11 ten-letter words or 10 eleven-letter words, such that all drop *just one* letter from and add *just one* letter to the existing formation. (It is inconceivable to us that such a string of words could be formed.)
6. Any unabbreviated word found in *Webster's Third New International Dictionary* (Unabridged) is acceptable, but you may not use any word more than once.
7. In the event of a tie, the earliest postmark wins.

Clip or copy this entry blank and send it to:

**Snail's Pace, GAMES Magazine**  
515 Madison Avenue, New York, NY 10022

Word	Number of Letters
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____
8. _____	_____
9. _____	_____
10. _____	_____
11. _____	_____
12. _____	_____
13. _____	_____
14. _____	_____
15. _____	_____
16. _____	_____
17. _____	_____
18. _____	_____
19. _____	_____
<b>TOTAL SCORE:</b> _____	
<b>Name</b> _____	
<b>Street Address</b> _____	
<b>City</b> _____	<b>State</b> _____ <b>Zip</b> _____

Void where prohibited. Postmark deadline: July 1, 1978.

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# PENCILWISE



## Crossword à l'Anglaise

by Jack Luzzatto

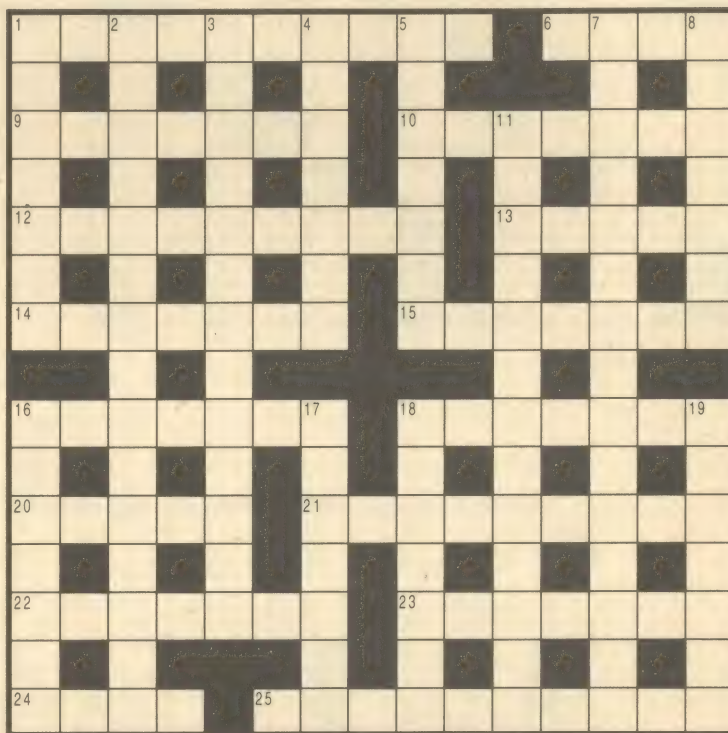
Foiled by the clues? That's the fun of British crosswords. Although they often seem ridiculous, the clues usually provide specific directions. Follow them! Also watch out for puns and anagrams. For example, 1 ACROSS, TOURNAMENT, means "sporting event," but is also an anagram for RENT AMOUNT—"changing" is the clue. Numbers in parentheses indicate the number of letters in answer word or words.

### ACROSS

- 1 Changing rent amount can produce a major sporting event (10)
- 6 A row of mean streets (4)
- 9 Experience can gain the guerdon (7)
- 10 Mad lies designed to deceive (7)
- 12 Uncommon sense, when among the rash, exercises some control (9)
- 13 University pundit sets the style (5)
- 14 Sharp reprimand is read for the civil disturbance (4, 3)
- 15 Souse, reeling around little Rhode Island, turns sober (7)
- 16 I leave the peculiar to explain their confusion (5, 2)
- 18 Should top ads be in such a poor position? (3, 4)
- 20 War in South Dakota for grassland (5)
- 21 As a torrid means, these do rather well (9)
- 22 Here's a tip: she's a cold person (7)
- 23 A unique era of the past (7)
- 24 A confusing ceremony will make one tire quickly (4)
- 25 There's a storm seen scattering small sailboats (3, 7)

### DOWN

- 1 Hero with not enough guts should become more rugged (7)
- 2 The spy beneath those wraps is one fine fellow (10, 5)
- 3 Florence Nightingale held her resentment a long time (6, 1, 6)
- 4 Astronaut clique in lunar decline (7)
- 5 Distortedly sees men as vengeful spirits (7)
- 7 Undercover policy of warlike people (4, 1, 3, 7)
- 8 They upset the Red gods in 1977! (7)
- 11 Honest brokers with blocks of stock (6, 7)
- 16 His care of the till is crooked (7)
- 17 Perfect model makes Pa groan (7)
- 18 When this turns to boredom, it's just for sleep (7)
- 19 Examiners of broken streets (7)



Scratch Sheet (You'll need it.)

Answer Drawer, page 62



# A Hawaiian Cipher

by Ken Webb

It's not as difficult to learn a little of the original language of Hawaii as you might think. Like every other language, Hawaiian has its own internal logic. English and Hawaiian have different ways of stringing letters, words, and thoughts together, but each is fairly consistent within itself. With that in mind, compare these Hawaiian phrases and their English equivalents. Then test your "deciphering" ability on the examples that follow.

He lei ko'u. .... I have a lei.  
He wa'a kona. .... He has a canoe.  
He lei nani kou. .... You have a pretty lei.  
He wa'a hou ko'u. .... I have a new canoe.  
He wahine 'oe. .... You are a woman.  
He Hawai'i au. .... I am a Hawaiian.  
He wahine kēlā. .... That is a woman.  
He mu'umu'u Hawai'i kēlā. .... That is a Hawaiian muumuu.  
He Hawai'i keia. .... This is a Hawaiian.  
He hale hou keia. .... This is a new house.  
He hula maika'i keia. .... This is a good hula.

**At this point you should know enough Hawaiian to translate these English words:**

- |                   |                   |
|-------------------|-------------------|
| 1. lei _____      | 10. he has _____  |
| 2. canoe _____    | 11. you are _____ |
| 3. woman _____    | 12. I am _____    |
| 4. Hawaiian _____ | 13. that is _____ |
| 5. muumuu _____   | 14. this is _____ |
| 6. house _____    | 15. pretty _____  |
| 7. hula _____     | 16. new _____     |
| 8. I have _____   | 17. good _____    |
| 9. you have _____ | 18. a _____       |

**Now you should have no trouble "deciphering" these phrases:**

19. He Hawai'i 'oe. \_\_\_\_\_  
20. He hale maika'i kona. \_\_\_\_\_  
21. He lei hou keia. \_\_\_\_\_  
22. He wa'a Hawai'i kou. \_\_\_\_\_

**And can you translate these into Hawaiian?**

23. I am a woman. \_\_\_\_\_  
24. I have a new hula. \_\_\_\_\_  
25. That is a pretty woman. \_\_\_\_\_  
26. You have a Hawaiian muumuu. \_\_\_\_\_

*Answer Drawer, page 62*



# A Run for Your Money

by J.L. Wilkinson

## ACROSS

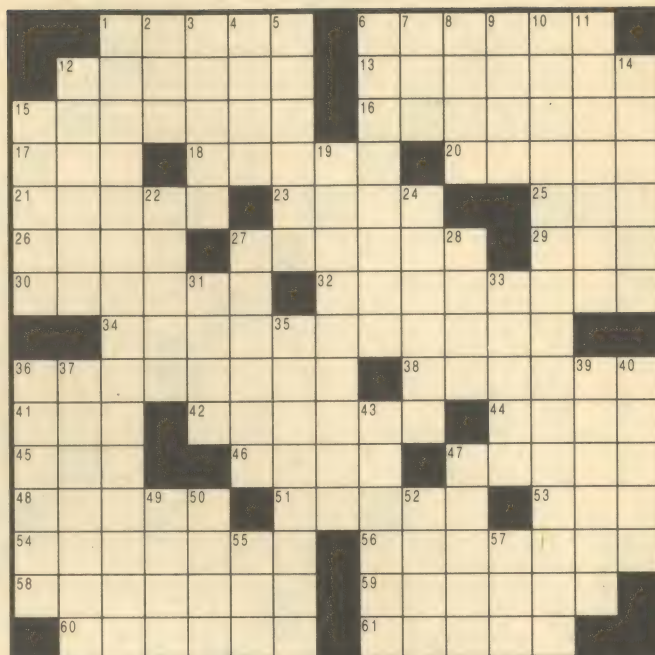
- 1 Money, lucre, riches
- 6 Take a walk, Southwestern style
- 12 Jury-summoning writ
- 13 Kind of illusion
- 15 Egg inspector
- 16 Perform surgery
- 17 Ancient Greek vessel
- 18 Eye and wisdom, to name just two
- 20 Seed coat
- 21 Complete happiness
- 23 Asiatic palm for thatching
- 25 — and hers
- 26 Slippery
- 27 Refuse an invitation: 2 wds.
- 29 Meet a poker bet
- 30 *Streetcar's* Mrs. Kowalski
- 32 Misers
- 34 Profligate
- 36 The corporate river of money? 2 wds.
- 38 Plow's cutting tool
- 41 Mont Blanc, e.g.

- 42 Dressed like a Roman senator
- 44 — Mater
- 45 West of Hollywood
- 46 Predicament
- 47 Tap basics
- 48 Commonplace
- 51 Spiny orange tree named for Indian tribe
- 53 Marine ins. policy
- 54 Cleaned out the safe deposit box
- 56 Board men
- 58 Recurrence of symptoms
- 59 Locomotive
- 60 More compact
- 61 Trapshooting

## DOWN

- 1 Paupers: 2 wds.
- 2 Football lineman
- 3 Sings gaily
- 4 No charge
- 5 Placid
- 6 Belittle: Slang
- 7 Learner, novice: Abbr.
- 8 Let it stand
- 9 Green isle

- 10 Resolution of a legal suit: 3 wds.
- 11 More shabby
- 12 Rascal, knave
- 14 Oil-rights arrangements
- 15 Dice or dices
- 19 Pennypinchers
- 22 A slim beauty
- 24 A ridiculous show: 2 wds.
- 27 Synthetic fabric
- 28 Cold: Span.
- 31 Bank of Paris
- 33 Half-tone below D
- 35 Naive humanitarian: Colloq.
- 36 Car for the outdoor life
- 37 Frightened
- 39 Reich
- 40 Scrapes harshly
- 43 Provokes
- 47 Suit fabric
- 49 Tennis player Smith
- 50 Barks shrilly
- 52 Sticky stuff
- 55 Compass point
- 57 For shame!



Answer Drawer, page 63

# Headliners

by Nancy Atkinson

## ACROSS

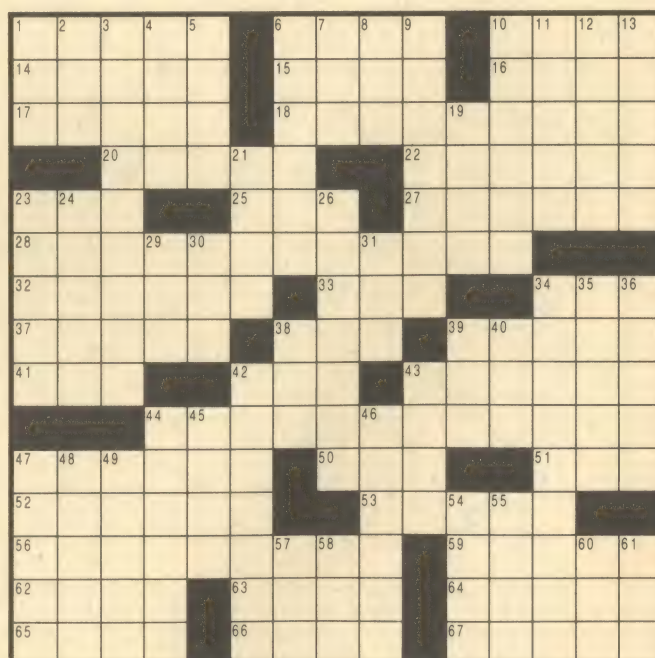
- 1 Retrieve
- 6 Decree
- 10 Actress Goldie
- 14 Nimble
- 15 — *Karenina*
- 16 Pierre's friend
- 17 Without nominal value, as shares
- 18 Sweden's tennis star: 2 wds.
- 20 Walking — (happy): 2 wds.
- 22 Hard worker
- 23 It goes with scared or down
- 25 Archaeological site
- 27 Tidal channel used as drainage canal
- 28 Problems that sap the strength of many nations: 2 wds.
- 32 Heroic
- 33 Toward the stern
- 34 Sandwich, for short
- 37 Tennis player Guillermo
- 38 Donkey
- 39 Animal track
- 41 Blow up: Abbr.
- 42 Pacino and Smith
- 43 Plane route
- 44 Hockey team: 2 wds.
- 47 Form of occultism

- 50 Way off
- 51 Superlative ending
- 52 Opposite the mouth
- 53 Russian city
- 56 Cab. member Cyrus: 2 wds.
- 59 Driving maneuver
- 62 Mexican dish
- 63 One type of ticket
- 64 Black tea
- 65 Paradise lost
- 66 The main part
- 67 Gritty

## DOWN

- 1 Aficionado
- 2 Kind of trip
- 3 Speaker of the House: 2 wds.
- 4 Highlands group
- 5 Juno
- 6 Material
- 7 Shot in the arm: Abbr.
- 8 Year: Span.
- 9 Most pungent
- 10 Nun's and riding
- 11 Soap plant
- 12 Electrician
- 13 Brazilian river
- 19 Front of an airplane
- 21 Pastoral poem
- 23 Sandpiper

- 24 Open up a new shirt
- 26 "The Green, Green — Home": 2 wds.
- 29 Electronics giant
- 30 Fuel
- 31 Conditions
- 34 Commissioner of baseball: 2 wds.
- 35 Interest items
- 36 Lovers' meeting
- 38 Flight height: Abbr.
- 39 Olivier title
- 40 Photographic reconnaissance unit, for short
- 42 Meek — (very docile): 3 wds.
- 43 Hillside shelter
- 44 Atomic particle
- 45 Norway's king
- 46 Specifically
- 47 Exclusive group
- 48 Draw — on (aim at): 2 wds.
- 49 Bowling in Bologna
- 54 Gists
- 55 Portico
- 57 Precedes classic or phyte
- 58 Bounder
- 60 Skelton
- 61 Negative answer



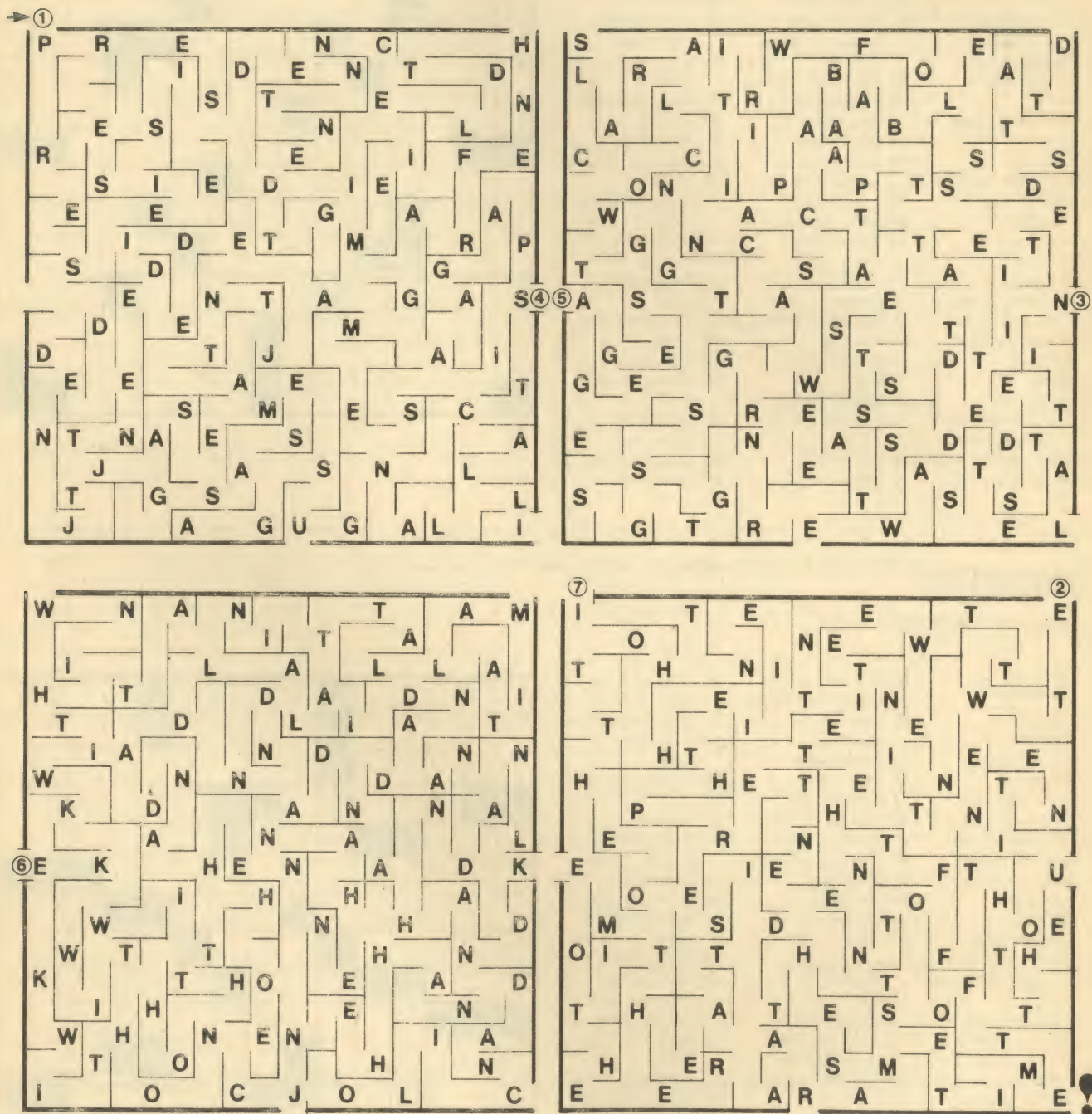
Answer Drawer, page 63



## by Len Fellows

As you proceed from the starting point, write each word

you uncover in the blanks below. The correct route spells out the sentence in consecutive letters, so don't skip any as you turn corners and wind through the maze. As a help, we have numbered the entrances from box to box in their correct order. (A word may begin in one box and end in another.) Write speculative words lightly as you discover them.



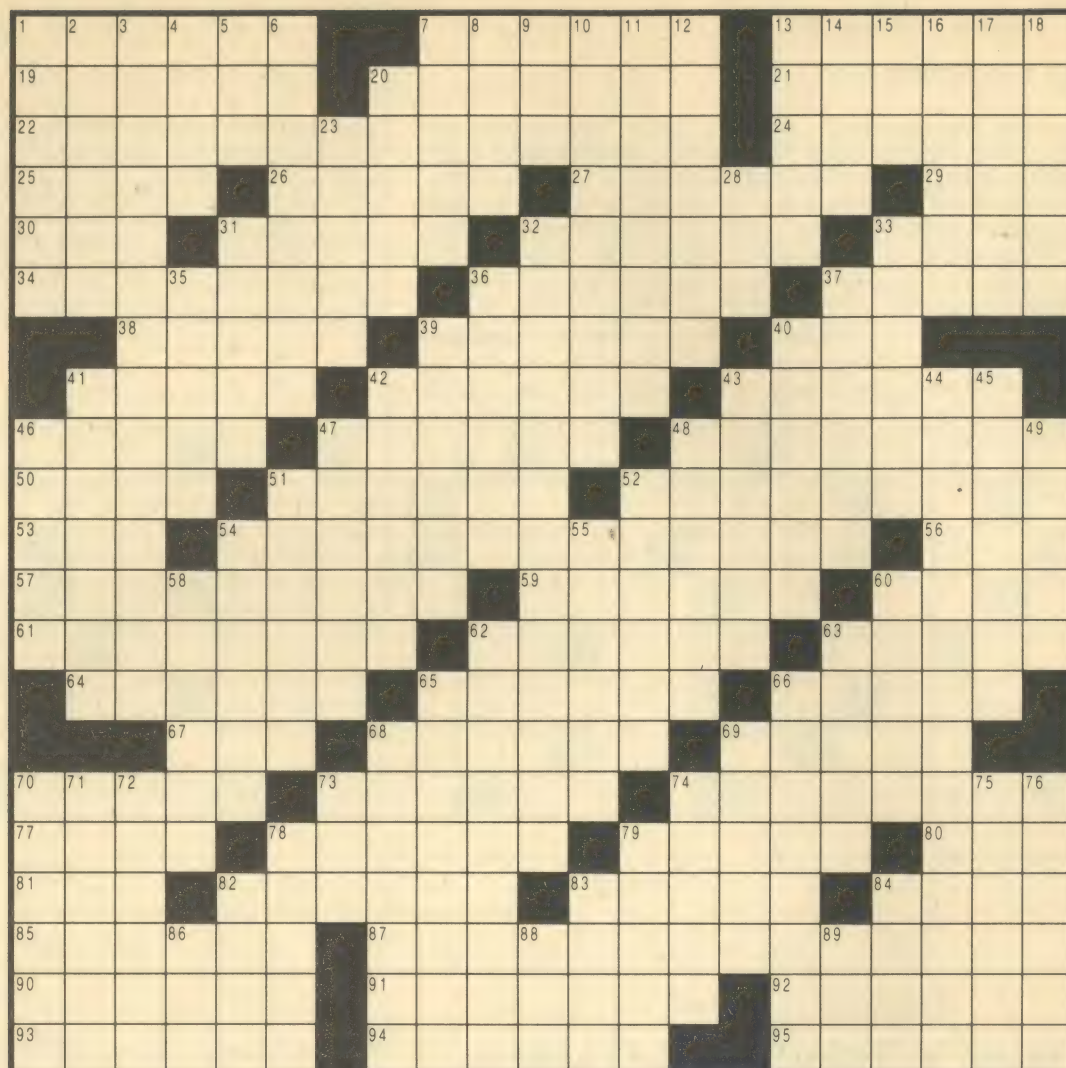
Answer Drawer, page 63

[illegible]



# Calling Cards

by Jack Luzzatto



Answer Drawer, page 62

## ACROSS

- 1 Movable staircase
- 7 Suez waters
- 13 Frolic
- 19 Relaxed
- 20 Fifty to six?
- 21 Bridge declarer
- 22 Makes a bet on a hidden ace, for example
- 24 Threat
- 25 Chemical salts
- 26 Oldest in the group
- 27 Yelped, as a young dog
- 29 Criticize harshly
- 30 Dialect: Suffix
- 31 Mercury and Roosevelt, e.g.
- 32 Yugoslavian provinces
- 33 Baton
- 34 Sieve
- 36 Vegetable
- 37 Pub game
- 38 Turns state's evidence, e.g.
- 39 Most robust
- 40 Clean (up)
- 41 Pinnacles
- 42 Monkeylike animals of Madagascar

- 43 "You'd be — to come home to"
- 46 Early anesthetic
- 47 Supervise
- 48 Going round and round
- 50 Dull fellow
- 51 Casual observation
- 52 Wheats used for spaghetti
- 53 Town on site of ancient Rhages, Iran
- 54 Makes a mistake in the game
- 56 Belonging to poet Eliot?
- 57 Running riot
- 59 Puts in a sty
- 60 Frisson of horror
- 61 Tougher
- 62 Too curt for courtesy
- 63 Gem of the ocean
- 64 Climb
- 65 Croquet hammer
- 66 Spear
- 67 Barrel for the poker party
- 68 Stored grain
- 69 Lace loop
- 70 Blackbirds
- 73 Rice dishes
- 74 Attractive to tenants
- 77 Out of the wind
- 78 Government in power
- 79 Whines
- 80 Mate of ewe
- 81 Shareholder's plum: Abbr.
- 82 Amounts or portions
- 83 Gorges
- 84 Attaché
- 85 Vinegar
- 87 Cardplayer getting whipsawed
- 90 Sister of Moses
- 91 — purposes (working against each other)
- 92 Place — (make a bet)
- 93 Reliable
- 94 Not far
- 95 Advantage of TV dinners

## DOWN

- 5 Road curve
- 6 Fortune teller's card uses
- 7 Vexes considerably
- 8 Fifty-fifty, as with odds
- 9 Month: Abbr.
- 10 What good drivers do
- 11 Gothic atmosphere
- 12 "Let us kiss —" (Drayton)
- 13 Arrives
- 14 Mimicked
- 15 Archdeacon's title, for short
- 16 Equal in standing
- 17 Take back one's words
- 18 Tendencies
- 20 Entrance hall
- 23 Approaches the target (with in)
- 28 Bridge or tea affair: Abbr.
- 31 Truck stop
- 32 How to lose happily at cards
- 33 American elk
- 35 Pointed a gun
- 36 Tourist's trademark
- 37 Eminent drake
- 39 Announcer
- 40 Engines
- 41 Home of the Braves
- 42 He hobbles
- 43 "Never . . . was so much owed by — to so few." (Churchill)
- 44 Rubber game
- 45 Removal of error
- 46 Beige colors
- 47 Having office furniture
- 48 Mental image formed by successive sense impressions of similar objects
- 49 River in Holland
- 51 Putting food through a strainer
- 52 Depleted, as one's strength
- 54 Barroom brawls
- 55 Winning expressions
- 58 Taunt
- 60 Birthplace of Columbus
- 62 Historic Spanish city
- 63 Treaties
- 65 Have an effect (usually against)
- 66 Tennis referee
- 68 Third-base coach, e.g.
- 69 Volcano in Martinique
- 70 Chairladies
- 71 Draw out information
- 72 Venerate
- 73 Often palmed in the shell game
- 74 Feelings of compassion: Arch.
- 75 Scoops from the pot
- 76 Arabian noblemen: Var.
- 78 Teetotaler's gin
- 79 Cardsharp prey
- 82 Four-sided college courtyard
- 83 He's too good for anybody
- 84 Madam, I'm — (a palindrome)
- 86 Aunt: Span.
- 88 Not recoverable: Abbr.
- 89 — Jima



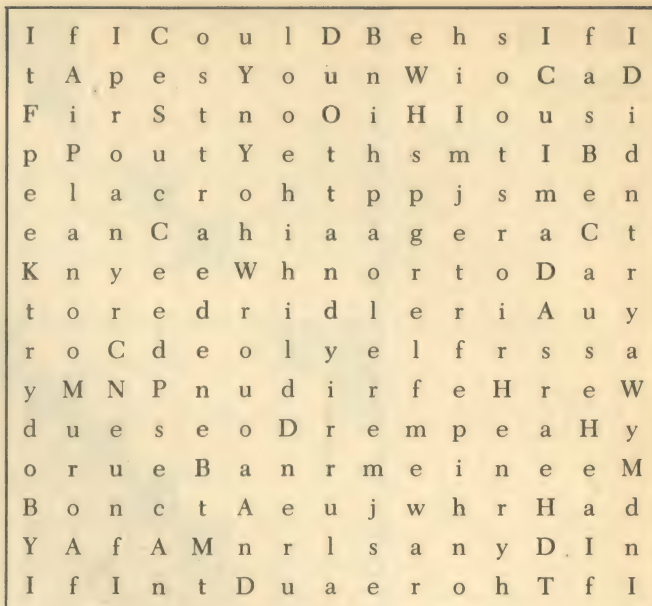
# Phrase-Maze

by Christine Foley

"If" is the first word of a well-known quotation hidden in the Phrase-Maze. The final word of the correct quotation is immediately followed by the name of the man who said it. Other quotations dead-end in anonymity. They are there to mislead.

The letters of each word are in proper order. A capital letter indicates the beginning of a word, although the same capital letter may be used within another word. The first letter of each new word starts in a square next to or diagonally adjacent to the last letter of the previous word. The words may be arranged vertically, horizontally, or diagonally, and they may be spelled in any direction (though each word appears in a straight line).

Spaces below indicate words in the quotation and author's name.



Answer Drawer, page 62

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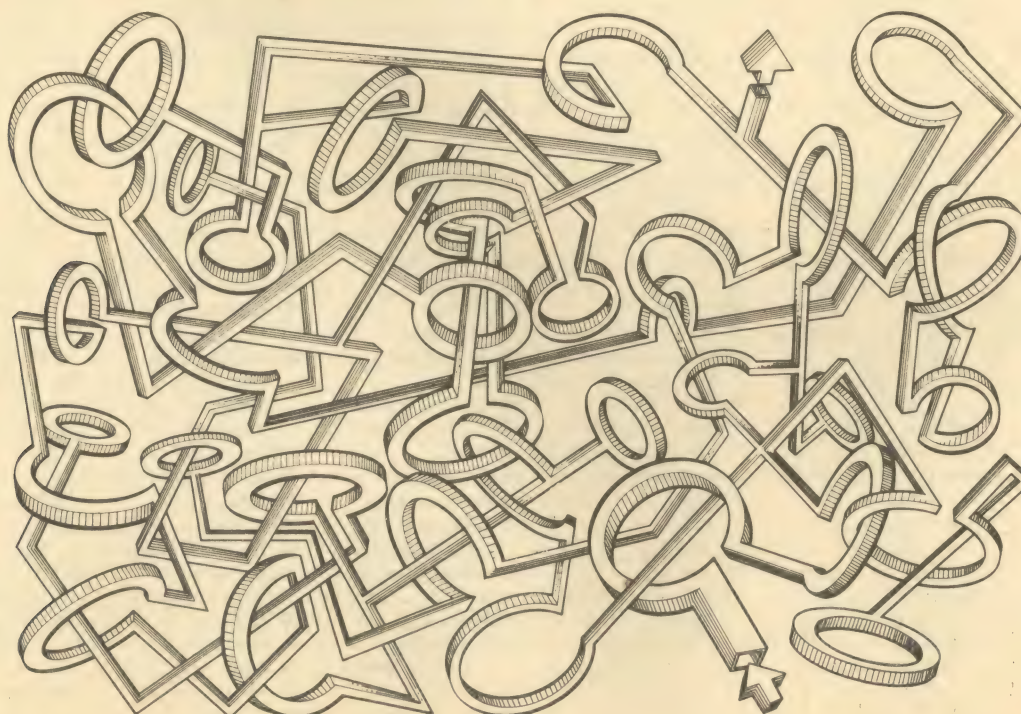
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# Rings 'n Things: A 3-D Maze

by Larry Evans

The arrows lead you round and round through the rings. Try not to get dizzy. Note: Stay *inside* the tube.

Answer Drawer, page 62





# Double Cross

by Michael Ashley

Once you get into it, our Double Cross acrostic is actually double fun. To solve it, guess as many of the words defined below as you can, write them in on the numbered dashes, and then transfer them to the correspondingly numbered squares in the puzzle. Black squares indicate spaces between words; if there is no black square at the end of a line, the word continues on the next line. Don't despair if you don't guess all of the defined words at first—as you fill in the puzzle grid with letters, words

will begin to take shape, so you can work back and forth between both sections of the puzzle. (The letters that appear at the top of each square in the grid refer to the defined words below.) The completed puzzle will read as a quotation from a published work, and the first letter of each filled-in word below, reading down, will spell out the author's last name and the title of the work from which the quotation is taken.

	1M		2V	3J	4W	5Y	6G	7F		8N	9I		10F	11C	12X		13P	14Q	15N	16Y		17G	18O	19C	20V	21S	22T
	23A	24P	25G		26B	27H	28N	29L	30U	31O	32Q	33E	34L		35K	36Y	37Q	38P	39E	40F	41D	42L		43U	44R		45C
46I	47J	48G		49Y	50A		51J	52U		53N	54I	55K	56U		57D	58G	59A	60W		61Y	62R	63I		64X	65V	66J	
67M	68S	69I	70E	71A	72U		73D	74L		75R	76E	77B	78K	79V		80P	81U	82C	83J		84E	85M	86D	87X	88R		89S
90B	91Y	92A		93R	94H	95M		96U	97T	98P	99L	100I	101B	102F	103H	104J		105W	106A	107S	108O		109U	110M		111B	112J
113F	114O	115P	116Q	117N	118Y		119I	120E		121T	122R	123G		124N	125G	126L	127O	128Q	129C		130V	131K		132A	133C	134V	135D
	136F	137Q	138H		139O	140W	141Q	142H	143B	144R	145C		146S	147X	148C	149K		150T	151A	152J	153K		154U	155H	156W	157G	
158C	159E	160F	161M	162Q		163W	164P	165Q	166V		167J	168D	169R	170E		171B	172J	173G	174A		175M	176U	177E	178P	179Q	180J	

Answer Drawer, page 64

A.	Shut out, in sports .....	23	71	132	92	106	174	59	50	151		
B.	Golan or Wuthering .....	90	101	143	26	111	77	171				
C.	U.S. resident from abroad .....	11	19	45	82	145	133	148	129	158		
D.	Astringent organic compound .....	57	86	41	135	73	168					
E.	Study of word origins .....	76	177	39	84	159	33	170	70	120		
F.	Powell-Loy classic (with <i>The</i> ) .....	7	10	40	102		113	136	160			
G.	Diner, greasy spoon .....	6	17	25	48		58	173	125	123	157	
H.	Did a magazine job .....	27	138	94	103	155	142					
I.	Volume of related works .....	54	100	9	69	119	46	63				
J.	Idiotic .....	3	51	66	83	152	180	104	167	47	112	172
K.	Cunning .....	35	55	78	131	149	153					
L.	Part of A.E.C. ....	29	74	99	126	42	34					
M.	Inspiring fear and wonder .....	1	67	85	95	110	175	161				
N.	Quick-witted .....	28	8	53	124	15	117					
O.	Neat and trim .....	127	31	114	139	108	18					
P.	Teacher's pet .....	13	24	98	164	38	178	80	115			
Q.	The Godfather's milieu .....	14	137	162	128	37	165	179	116	32	141	
R.	Certain metalworker .....	88	62	144	44	75	122	169	93			
S.	Complete, total .....	21	89	146	68	107						
T.	Portnoy's creator .....	22	97	150	121							
U.	Delicacies for robins? .....	56	43	30	72	81	154	176	52	96	109	
V.	Part of Hong Kong .....	2	20	65	79	130	134	166				
W.	Toward the center .....	4	60	105	140	156	163					
X.	Snack .....	87	64	12	147							
Y.	Seeker of the Holy Grail .....	5	36	16	49	61	91	118				



# PROFESSOR HOFFMANN'S VICTORIAN PUZZLES

Answer Drawer, page 64

Professor Hoffmann was an authority on magic and puzzles during the Victorian era, and author of several excellent books on these subjects. Now, on a magical visit from the past, he has brought his favorite brainteasers for your enjoyment.

①

$$123456789 = 100$$

Good evening, ladies and gentlemen. My first puzzle deals with numbers. I want you to make the above mathematical expression correct by inserting two minus signs and one plus sign into it. (Example:  $12 + 34 - 567 - 89 = 100$ .) My example is wrong, of course, but there is a correct equation and your problem is to find it.



Mr. Puff, a connoisseur of coin problems, poses an interesting and, I daresay, devious little problem for us. Lay out twelve coins in the form of a square, four coins to a side. Now, rearrange the twelve coins so that there are five coins on each side of the square.

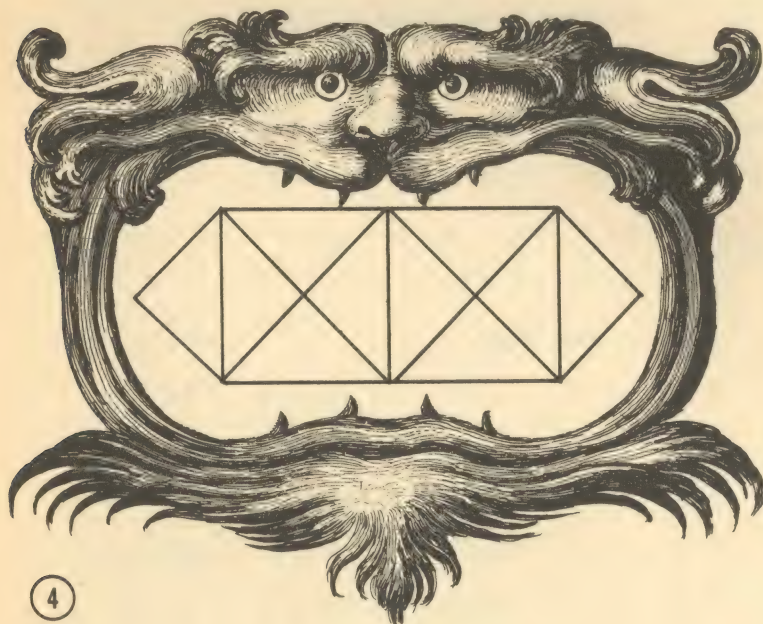


From Merlin's book, Arthurian Puzzles and Their Meanings, comes a coin puzzle reputedly 700 years old. In our somewhat updated picture, Merlin is pointing to four English pennies. Can you rearrange these coins so that each coin is equidistant from every other coin? Sounds easy, but it isn't.

③



A little farther on his book, Merlin mentions an encounter with a monster called "Sid the Ogre." To escape his clutches, Merlin had to duplicate the geometrical design pictured in Sid's mouth. It had to be drawn with one continuous line, that is, without lifting the pencil from the paper, and no part of the line could cross over any other part of the line. Could you have escaped becoming an entree on Sid's menu?



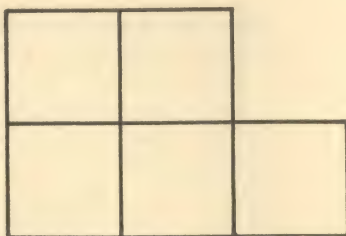
Coming into the room just now is my old friend Dunbar the Drummer. He has informed me that he intends to beat the drum once for each rectangle depicted in the diagram painted on his drum. How many times will he affront our hearing? Judging by the expression on his face, I should say that we are in for a long ordeal.



Willard Wordsworth has, most appropriately, devised an "insect bee" for us instead of a spelling bee. His rather pesty poser is for us to make at least six insect names using the letters below him. (And the old pedant informs us, with a wry wink, that he has also thrown in an arachnid, a plural, and an insect part!)



The other day a surveyor stopped by our Public House and told us of a peculiar job he had just finished. Two farmers had bought the five-acre parcel of land shown below and had asked him to lay out a straight fence that would divide their purchase into two equal plots. How did the surveyor do it?





# Dszquphsbnt!

by Norma Gleason

The following quotations and messages have been translated into code alphabets. The substitutions are constant throughout any one cipher, but they change from one cipher to the next. We put the easy puzzles first so you'll be warmed up by the time you approach the difficult ones. An asterisk (\*) indicates a

proper noun. Ciphers 7 and 8 are undivided. That is, we have concealed word divisions by simply putting letters in groups of five—although they are, of course, in proper order. Punctuation and asterisks have been omitted in these two ciphers. Extra clues are given in the box below, in case you get stuck.

## 1. SMALL PROBLEM

SDZQETK SNS SN LNSGDQ: "GNV  
BZM H ATSSNM LX CQDRR VGDM  
SGD. ATSSNM HR HM AZBJ ZMC  
H ZL HM SGD EQNMS?"

## 2. KNOWLEDGE?

RZOV KDYH DFTXLUHG DQ  
XQH DUQH UHSXWDWLRQ IRU  
ZLVGRP VLPSOB EHFDXVH WKHB  
DOZDBV ORRN SURIRXQG DQG  
KRRW RQOB RFFDVLRQDOOB.

## 3. STAGE FRIGHT

GSV SFNZM NLFGS RH  
DLMWVIUFO. RG YVTRMH DLIPRMT  
GSV NLNVMG BLF ZIV YLIM ZMW  
WLVB MLG HGLK FMGRO BLF  
IRHV GL HKVZP RM KFYORX.

## 4. SOLVING CRYPTOGRAMS

XWJ XK RMJ EDYOF RXXUY XK  
DWB FPBZRDWDUBYR OY DW  
DFSIDOWRDWFJ GORM RMJ  
PJUDRONJ KPJSIJWFOJY XK  
UJRRJPY XK RMJ DUZMDEJR.

## 5. INFERNAL REVENUE

KNDUB BTIB OIS GNU GTPU,  
BDEUVUR NU VBA IHVA, BTVA  
PIEBT VZCNAPA UN IOOVBVNUIY  
BIHPA. QENZ \*QEIUXYVU \*C.  
\*IOIZA.

## 6. SCHOOL OF HARD KNOCKS

ZH PKCSTBQL TKY TQL  
\*ZKYBQL'Y; ZH YAF K \*MT.P,  
NCB RKBTL UY BTQ AFXH AFQ  
ETA TKY K V—A—N (KFP MKHY  
BTQ NUXXY).

## 7. MAP TRAP

RHDGX QWITX LQDJD CBLOE  
QDQBW ITQBV YJEE SXTCE  
WRIRK XYCJB WLOGC JIXMR  
ITCJI QWCJS IQBWB CMMRE  
EHCLX CBXYC EWRIA XQBBX  
MXHIX GWQEX

## 8. THORNY TONGUE TWISTER

NKRFG KLBOM NKL MN BRNKR  
NKL MN BRMLI NRJML INRPW  
MLRQR FIOEM LINRP NKL MN  
BRMNK JOMNN KJRRN KFOMW  
EPGJL ZABUN KLMNB RMNKJ  
FOCKN KRNKL ZAFIK LMNKO DX

Answer Drawer, page 64

### Extra Clues in Case You're Stuck

General: Each title provides a clue of sorts. High frequency letters are E, T, A, O, I, N. In two of the first six ciphers, you'll find an "alphabet shift" code in which cipher letters and plaintext letters are a uniform number of letters apart, as in the title of this page. Also watch for a cipher keyed by a reverse alphabet, making substitutions reciprocal (that is, if A=J, then J=A, etc.)  
Cipher 1: The word that appears twice is BUTTON. This is a "shifty" one—look carefully.

Cipher 2: The word BECAUSE appears in the plaintext.

Cipher 3: The word MOMENT appears in the plaintext.

Cipher 4: Remember that the cipher letter appearing most often is probably a substitute for plaintext E.

Cipher 5: Compare the fourth, seventh, and thirteenth words.

Cipher 6: One of the three-letter words is an abbreviation and does not contain a vowel.

Cipher 7: The plaintext word SOMEONE appears. Look for that pattern of repeated letters.

Cipher 8: The title helps.



# The Common Denominator

by Len Fellows

All of these famous folks have something interesting in common, which you will discover by solving this "people-puzzle." First, write the name of each person in the correct box. The clues will help. Next, in the word-find chart, find those names *plus* the **boldface** words in the clues. As you find them, loop them. Now, transfer the letters, by number, to their correct places in the Answer Boxes below. **IMPORTANT:** Only the letters *within the loops* are correctly numbered to fit the answer. When completed, you'll know the Common Denominator.

Answer Drawer, page 64



## HINTS:

The "King" of **Siam**.

Famous as the "**wheelchair** chief."

The beloved **tramp**.

A Greek named "**Zorba**."

Otherwise known as "**Sherlock**."

"**Mammy**" was his song.

Also wrote *My **Wicked**, Wicked Ways*.

Was married to **dancer** Eleanor Powell.

**Crosby** was his close friend.

Her **sister** is a star, too.



Answer Boxes

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21



# Noteworthy

by Edith Rudy

Once you get the hang of this "screw" puzzle, you'll find that this is one case where going in circles is a direct route to the solution. Hidden in the grid are the 59 composers named in our list. However, their names do not appear in straight lines. Each name spirals either clockwise or counterclockwise around its first letter. (Successive letters are horizontally or vertically, but *not* diagonally, adjacent to each other.) Also, letters in the grid may appear in more than one name.

BACH	GERSHWIN	RACHMANINOFF
BACHARACH	GLINKA	RAVEL
BARTOK	GLUCK	RIMSKY-KORSAKOV
BÉETHOVEN	GRIEG	ROSSINI
BERLIN	HANDY	RUBINSTEIN
BERLIOZ	HAYDN	SAINT-SAENS
BERNSTEIN	HINDEMITH	SCARLATTI
BIZET	IVES	SCHUBERT
BLOCH	JOPLIN	SCHUMANN
BRAHMS	LISZT	SHOSTAKOVICH
BRITTEN	MASSENET	SIBELIUS
BRUCKNER	MONTEVERDI	SMETANA
CHAUSSON	MOUSSORGSKY	SOUSA
CHOPIN	MOZART	STRAUSS
COPLAND	OFFENBACH	STRAVINSKY
DEBUSSY	PADEREWSKI	SULLIVAN
DUKAS	PALESTRINA	TCHAIKOVSKY
DVORAK	PROKOFIEV	VERDI
ELGAR	PUCCINI	WEBER
ELLINGTON	PURCELL	

Answer Drawer, page 64

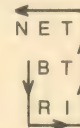
C A  
 R M L E D Y  
 N U P L I U R S  
 I S R C E S S D A A  
 N F C H M B I N U K C U  
 G L F A R A U R S O N B R P  
 K C U O N I N I E T D E R L I E  
 O S K O V I R B L A D A P E B O M T N Y S A H M  
 U S A S H C P E R D I K S W A Z A R E K T R B S  
 I I T T S O H O V M O E R N E G I T H C S S A Y P  
 T C S A I S T B E T N G S T H C D E U S N I V E S  
 A R L E B E E N T I W H T U S T I M A N D E U C  
 N G F L I Z O K T E R K Y B E R I D A I H M P C  
 P T Z S N E A M N R S O U D A G L H T I N I  
 I A C A S S S E W G M S S Y  
 G E I N T L G A R O S C  
 G R R A I N K D V I  
 L E V D W E I S  
 A E R E B C  
 L O

## Examples:

TCHAIKOVSKY spirals thus:



BRITTEN, on the other hand, appears:



M  
 U S I  
 R T O V S K  
 A B K T C Y R T  
 K H I A H C A S A  
 T I N R B A U S S H  
 C P C A C H C S S I H  
 A O H B O F N O R N E R  
 R M S N E F T I B N  
 O I E V G L E T S I  
 S F P R A E O E V  
 P O K O R S O T  
 L J Y R I A  
 I N K S M K  
 H E T H V O  
 P L A L I N  
 O C N L E G  
 E Y D N O T  
 S A H A V I  
 V M S N S L  
 N E T A U L  
 A B T G E B  
 E R I N A A  
 S T P A T E  
 S S E L O T  
 I N A B C L  
 T N Y S A H M  
 R E K T R B S  
 C S S A Y P  
 U S N I V E S  
 M A N D E U C  
 I H M P C  
 L H T I N I



# RightAngles

by E.R. Galli

The special twist of RightAngles is just that—the entries don't go into the diagram in a straight line. Each word makes one right-angle turn somewhere along its length.

Clue numbers include a letter indicating starting direction: thus, 1E begins on square 1 by heading *east*, and so on. The solver's task is to determine where each word makes its right-angle turn, and in which direction. Important: Each square in the diagram is occupied by a letter that appears in exactly two words, no more, no less.

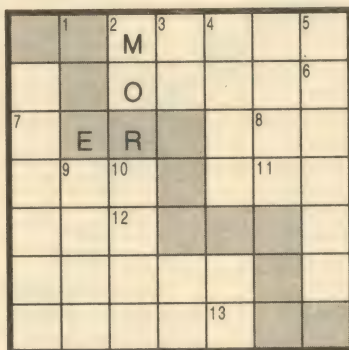
RightAngles #1 offers the actual words to be entered into the diagram, with one crooked exception—the only word to make more than one right-angle turn begins in the upper left-hand corner and follows the tortuous path of shaded squares to the lower right-hand corner. This particular word's meaning is suggested by its position in the grid, and that is the only clue we offer.

RightAngles #2 provides only the definitions for the words to be entered. (Each answer word's length is given in parenthesis.) Crooked thinking helps.

Answer Drawer, page 64

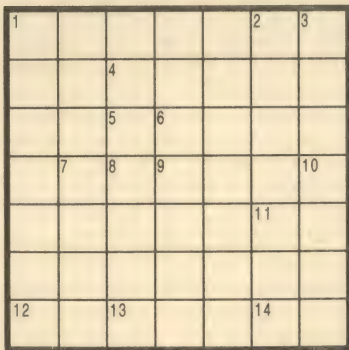
## RightAngles #1

- 1E Americano
- 2S More
- 3S Excoriated
- 4E Racquets
- 5W Caudle
- 6W Quixotic
- 7S Posterior
- 8E Duets
- 9W Hopi
- 10S Warble
- 10W Why
- 11W Lac
- 12W Aye
- 13W Tablets



## RightAngles #2

- 1E Generous (9)
- 1S Develop a stomach problem (8)
- 2S Kind of eyeglass lens (7)
- 3S Childishly sentimental (7)
- 4E Kind of catcher or puncher (3)
- 5S Computer readouts (4)
- 5W Las Vegas equipment (4)
- 6E Home of the brave (6)
- 7S Losers who need aspirin? (9)
- 8W Influenza variety (5)
- 9S Often part of the city skyline (4)
- 10S Bridge nuisance (8)
- 11E Barbecue meat (4)
- 12N Fortune teller's card (5)
- 13E Part of the English countryside (5)
- 14N Airships (10)



# FOLD THIS PAGE! YOU ARE APPROACHING THE WORLD'S MOST ORNERY CROSSWORD PUZZLE

The giant puzzle on this and the following pages has two independent sets of clues: "Hard" and "Easy." If you use only the Hard Clues (beginning below and continuing beneath the diagram on the following right-hand page), you'll find this puzzle among the most challenging you've ever done. But there's also a set of Easy Clues (on the following left-hand page) to bail you out with additional information in case you get stuck. Keep the Easy Clues hidden by folding this page on the dashed line and tucking this side under. Then turn the page. To peek or not to peek is up to you.

## "... Then Get Out of the Kitchen"

by William Lutwiniak

### Hard Clues

#### ACROSS

- |                                    |                                    |  |
|------------------------------------|------------------------------------|--|
| 1 The painted wake-robin           | 58 British submachine guns         | 103 Fulton's legacy?                       |
| 6 Distributed                      | 60 Sweet gum                       | 105 Skillful maneuvers                     |
| 11 Ottoman big shots               | 61 Greek letter                    | 106 Honey                                  |
| 17 Success to <i>The Producers</i> | 62 Pierces                         | 107 Display ostentatiously                 |
| 21 Comfort                         | 63 —bread                          | 108 Part of a pot                          |
| 22 Digest: Arch.                   | 64 Macerate                        | 109 Resemble                               |
| 23 Goddess sculpted by Phidias     | 65 Rated                           | 110 Suffix for "in the style of"           |
| 24 Silver, to an alchemist         | 67 Instigator                      | 111 Extra ribs?                            |
| 25 Emcees                          | 68 Mixed up, as usual              | 112 Makes attractive                       |
| 27 High servers                    | 69 Exhaust                         | 114 Take as actual                         |
| 29 Up — (baffled)                  | 70 Reinforcements                  | 115 Antlers of a stag, in heraldry         |
| 30 Peduncle                        | 71 Legal thing                     | 117 Hit lightly                            |
| 31 Backbone of business            | 72 Lacking in intelligence         | 118 Associate                              |
| 32 Records                         | 74 Focuses attention (on)          | 120 Wintertime in N.Y.                     |
| 33 Home for an inanimate horse     | 75 Sally Lunns                     | 123 Synonym of 62 ACROSS                   |
| 34 Characterizes                   | 79 Set                             | 124 Descriptive of an angel or a bird      |
| 36 Ungovernable                    | 80 Zareba                          | 125 Woman's name                           |
| 37 Speculative ventures            | 82 Summon                          | 126 French darling                         |
| 38 To the — (all the way)          | 83 Cooking for an iron stomach?    | 128 Spiced up the flattery to win approval |
| 39 — age (long time)               | 85 Sign not seen at 17 ACROSS      | 130 Became calm                            |
| 41 Kiddled                         | 88 Dark beaver                     | 132 French sentence                        |
| 42 Joseph Kennedy post: Abbr.      | 89 Inexperienced                   | 133 Suave and smooth                       |
| 45 Less equivocal                  | 91 Music to Old MacDonald's ears?  | 134 Output of think tanks                  |
| 46 British cleaning woman          | 92 Combatant                       | 135 Flourished luxuriantly                 |
| 47 — Rimet trophy of soccer        | 94 Makes a new offer               | 136 Woodwind                               |
| 48 Hebraic dry measure             | 95 Witch in <i>Macbeth</i> , e.g.  | 137 Domineered                             |
| 51 Reflected                       | 96 Parisian parish priests         | 138 Spleenwort and osmunda                 |
| 53 Unsentimental                   | 97 Bust                            | 139 Angered                                |
| 56 Nevus                           | 98 Perfect exam scores             |  |
| 57 Full of prickly plants          | 99 Determine, as a star's altitude |  |
|                                    | 100 Dr. Watson, Sancho Panza, etc. |  |
|                                    | 101 Plunder                        |  |
|                                    | 102 Cut                            |  |



# The Easy Clues for the World's Most Ornery Crossword Puzzle.

(Don't peek until you read page 37.)

## ACROSS

- 1 Bernhardt or Churchill
- 6 Passed out the cards
- 11 Turkish commanders
- 17 Broadway failure
- 21 Consolation, alleviation of grief
- 22 Endow (with)
- 23 Greek goddess of wisdom (neat, eh?)
- 24 Ross or Rigg
- 25 They introduce after-dinner speakers
- 27 Flight attendants
- 29 — *Grows in Brooklyn*: 2 wds.
- 30 Plant stalks
- 31 Comedian Soupy
- 32 Goes in
- 33 Indoor sports area
- 34 Portrays
- 36 *The Call of the* —
- 37 Leaflets, circulars
- 38 Ball teams
- 39 Raccoons, for short
- 41 Played swing music
- 42 Hospital vehicle: Abbr.
- 45 More certain
- 46 Scorch
- 47 Author Verne
- 48 Taxi
- 51 Reflected in the looking glass
- 53 Like Easter eggs
- 56 Burrowing animal
- 57 Full of scratchy bushes
- 58 Stenographers, for short
- 60 Traffic light for caution
- 61 Tiny amount
- 62 Spears
- 63 Not tall
- 64 Precipitous
- 65 Assigned positions, as by ability, etc.
- 67 One who gathers wild bird eggs
- 68 Situation normal: all fouled up
- 69 Use money
- 70 Aids, relieves
- 71 Research: Abbr.
- 72 Partially cooked
- 74 Fixes firmly in place
- 75 Teatime munchies
- 79 Make into jelly
- 80 Army jail
- 82 Call together, as a meeting
- 83 Grating, as on the front of a car
- 85 Standing Room Only
- 88 Nutty confection
- 89 Color made with blue and yellow
- 91 Piggish sounds
- 92 Make a bet
- 94 Makes another offer at an auction
- 95 Withered old woman, hag
- 96 Heals the sick
- 97 Reduce in rank
- 98 Benson & Hedges, e.g.
- 99 Snap a picture
- 100 Fencing weapons
- 101 Lay waste to
- 102 Narrow cut
- 103 Ocean liners
- 105 Bridge strategies
- 106 Comedian Brooks
- 107 Recreation
- 108 Poker stake
- 109 Party token
- 110 East-southeast
- 111 Fifth wheel
- 112 Makes golden
- 114 Set firmly (in position!)
- 115 Clothing
- 117 Sacrifice hit
- 118 Either of two dancers
- 120 Superlative suffix
- 123 Javelins
- 124 Winged (like a teal)
- 125 Francis or Dahl

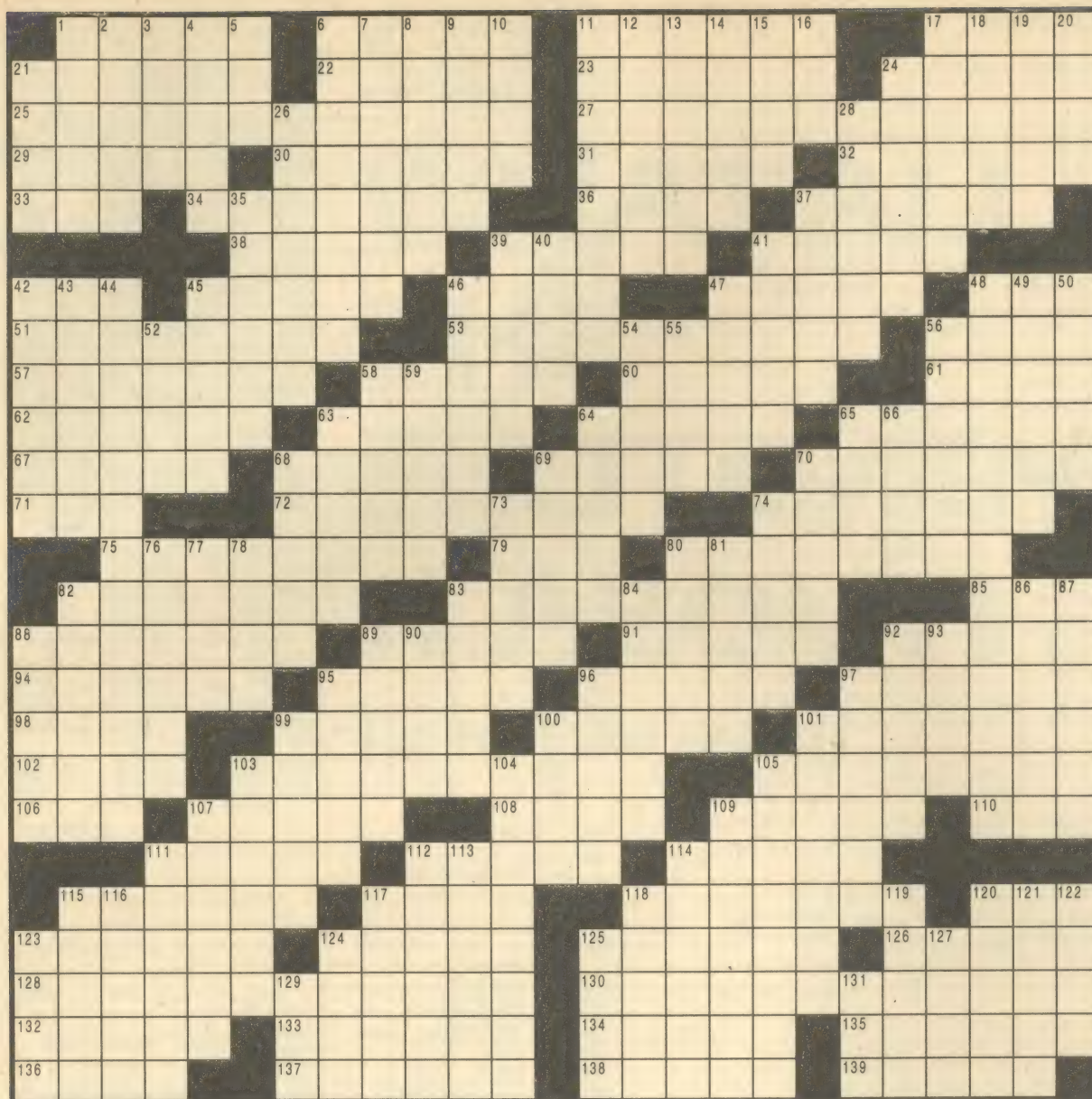
- 126 — Semple McPherson

- 128 Tried to get on someone's good side with flattery and attention: 2 wds.
- 130 Cooled off from a boiling rage
- 132 French arrest
- 133 Polished and polite (especially in the city?)
- 134 Notions
- 135 Engaged in a civil disturbance
- 136 Actress Donna or critic Rex
- 137 Ran the office
- 138 Sword, bracken, and maidenhair
- 139 Got under someone's skin

## DOWN

- 1 Like a chimney
- 2 Scare
- 3 Demolish: Var. (Erase is close)
- 4 Played a role
- 5 — and haw
- 6 Fated
- 7 Tempter
- 8 Experts
- 9 Baits that entice the fish
- 10 — *of the D'Urbervilles*
- 11 Answer to the sentry's challenge
- 12 Achieve
- 13 Prepares peas or nuts
- 14 Used an axe
- 15 Collections of anecdotes (by NASA?)
- 16 Serial: Abbr.
- 17 Two- — (tough)
- 18 Optical maser
- 19 Unique things (snore confusedly)
- 20 Quarterback's throw
- 21 Male deer
- 24 Disavows, like Simon Peter
- 26 Sought to attain
- 28 Dug into
- 35 Accustoms to hardship: Var.
- 37 Clerk, at times
- 39 Gregorian song
- 40 Rowing poles
- 41 Mint drink
- 42 Stroller
- 43 Desert hallucination
- 44 Heats water to 212° F: 4 wds.
- 45 More hurt
- 46 Chubby, rosy child
- 47 Agreed
- 48 Roast one's Christmas waterfowl: 3 wds.
- 49 Varies, modifies
- 50 Rosary
- 52 Indy 500, e.g.
- 54 With — breath
- 55 Sign of what's ahead
- 56 Chopped fine, as food
- 58 Layered, clay-like rock
- 59 Soho swells
- 63 Cobra or asp
- 64 Hex or charm
- 65 Former Secretary of State Dean
- 66 — role (perform): 2 wds.
- 68 Quiver
- 69 Quantity of yarn
- 70 Ruck, potato, and sad
- 73 Concur
- 74 Table tools
- 76 Join the army
- 77 Greedy
- 78 Felons
- 80 Whirling motion
- 81 Shades of color
- 82 French dialect in Louisiana
- 83 Ladies and —
- 84 "Every little breeze seems to whisper —"
- 86 Refastens
- 87 Otherwise: 2 wds.
- 88 Glass rainbow?
- 89 Obsolete coin worth fourpence
- 90 House section
- 92 River in Germany (not a sewer)
- 93 Amperes: Abbr.
- 95 Expensive: Fr.
- 96 Christian Egyptians
- 97 Signify, mean
- 99 Department or grocery
- 100 Locate
- 101 Water finder who uses a rod
- 103 Scanty, not plentiful
- 104 Supported by a neck strap
- 105 Quality of being swift
- 107 Verve
- 109 Juror # 1
- 111 Looked long and hard
- 112 Yellow tropical fruits for jelly
- 113 Chant
- 114 PGA's Arnie
- 115 "He that hath clean hands and — heart": 2 wds.
- 116 — Haute, Indiana
- 117 Chatters endlessly
- 118 — *and Prejudice*
- 119 Half-diameters
- 120 Ham it up
- 121 Stitched
- 122 Care for, watch over
- 123 Healed mark
- 124 Bushy hair style
- 125 Supposing that: 2 wds.
- 127 Fan's hero
- 129 Beknight or nickname
- 131 Do wrong





Answer Drawer, page 64

## Hard Clues (cont.)

### DOWN

- |                              |   |                                  |                                 |                                     |                        |
|------------------------------|---|----------------------------------|---------------------------------|-------------------------------------|------------------------|
| 1 Smutchy                    | 19 Humdingers in London                 | 47 Came about suddenly: Naut.    | 68 Get rid of, lose             | 93 Current units: Abbr.             | 117 Spills the beans   |
| 2 Morning sound              | 20 Plane fare: Abbr.                    | 48 Bring ruin upon oneself       | 69 Flight of wild geese         | 95 Synonym of 126 ACROSS            | 118 Pick of the litter |
| 3 Level: Var.                | 21 Spy on: Brit. slang                  | 49 Takes in or lets out          | 70 Plunders                     | 96 Descendants of ancient Egyptians | 119 Forearm bones      |
| 4 Didn't dally               | 24 Disowns                              | 50 Globules                      | 73 Tally                        | 97 Express                          | 120 Wax thespian       |
| 5 Border                     | 26 Soared                               | 52 Industrial watercourse        | 74 Bifurcates                   | 99 Reserve                          | 121 Needed             |
| 6 Ordained                   | 28 Sought laboriously                   | 54 Softened by soaking           | 76 Some do this to beat a draft | 100 Discovery                       | 122 Move (toward)      |
| 7 Siren                      | 35 Takes effect: Var.                   | 55 Prognostic                    | 77 Rarin' to go                 | 101 Haruspex                        | 123 Catface            |
| 8 Enthusiastic followers     | 37 Manicurist, at times                 | 56 Used mealymouthed words       | 78 Swindles                     | 103 Not dense                       | 124 Ethnic comb. form  |
| 9 Plunker and bucktail       | 39 Monotonous utterance                 | 58 The mesh of a net: Eng. dial. | 80 Eddy                         | 104 Hanged                          | 125 Quasi              |
| 10 Mrs. Dick Tracy           | 40 Shell power?                         | 59 U.K. dandies                  | 81 Musical steps                | 105 Stronghold                      | 126 Golden calf        |
| 11 Countersign               | 41 Drink appropriate for Blanche DuBois | 63 Plumber's tool                | 82 Southern French              | 107 Real meaning (of)               | 127 Duffer             |
| 12 Reach                     | 42 Horse with an easy gait              | 64 Short period                  | 83 Fellows                      | 109 Crew chief                      | 131 Slip               |
| 13 Conchs                    | 43 Sight for sore eyes?                 | 65 Brownd, crisp bread           | 84 Lake near Banff              | 111 Gawked                          |                        |
| 14 Cut                       | 44 Heats to ebullition                  | 66 Transactions                  | 86 Knots again                  | 112 Tropical fruits                 |                        |
| 15 Genus of freshwater ducks | 45 More aggrieved                       |                                  | 87 Threatening words            | 113 Recite monotonously             |                        |
| 16 Rev.'s forte              | 46 Seraph's underling                   |                                  | 88 Light refractor              | 114 Chaucerian pilgrim              |                        |
| 17 Ready to punch            |   |                                  | 89 Fourpence in maundy money    | 115 Orinoco tributary               |                        |
| 18 Holographic necessity     |   |                                  | 90 Lodge with                   | 116 — verte (pigment)               |                        |
|                              |   |                                  | 92 Münden's river, Germany      |                                     |                        |



# Oil Strike!

by Sid Sackson

A paper and pencil game for 2, 3, or 4 players.

**Object:** To strike the most oil. Sections containing from two to four drilling sites are leased and then the sites are drilled—resulting in a strike or a dry hole. Sites next to producing wells have a better chance of striking oil.

**Equipment:** One gamesheet, two dice, pencil for each player.

**Preliminaries:** Each player throws the dice and high total plays first. The first player chooses a section with two sites and claims it by writing his initials in it. The player to the left then chooses a section with either two or three sites. If 3 or 4 are playing, each chooses any remaining section he wishes.

## Play:

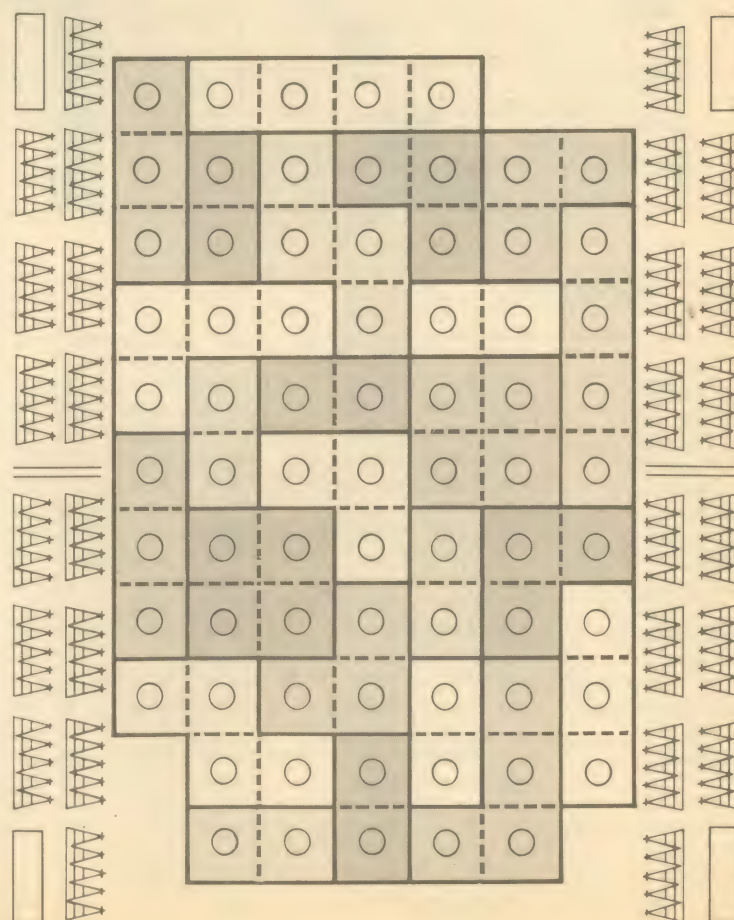
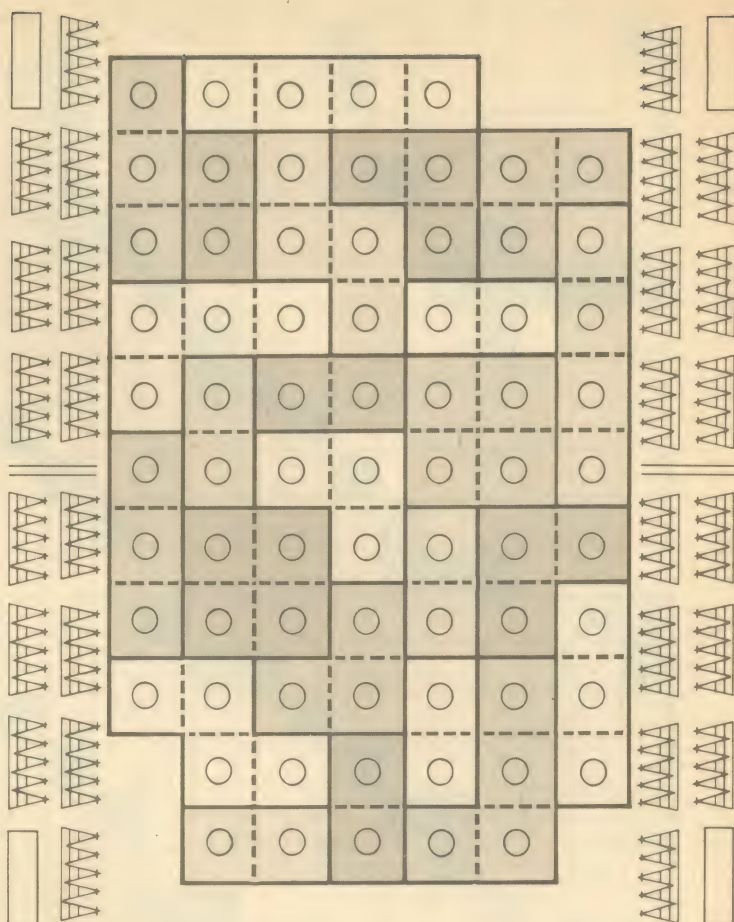
**1.** In his turn, a player picks one of his sites and throws the dice. If the total is *7 or lower*, it is a dry hole—marked with a cross. If the total is *8 or higher*, it is an oil strike—marked by blackening in the circle. A second site is drilled in the same manner. Each player, after his turn at drilling, chooses any remaining section, until all sections have been claimed. When no sections remain to be claimed, a turn consists only of drilling. If a player runs out of sites to drill, the other players continue with their sites.

**2.** When a site is drilled that is adjacent—including diagonally—to one or more producing wells (regardless of who owns them), the number of adjacent wells is added to the dice throw and a total of *8 or higher* results in an oil strike.

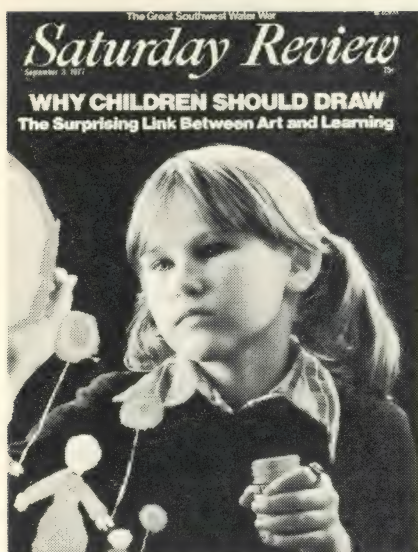
**3.** When drilling a site, a player may try for "extra production" by announcing either "double well" or "quadruple well" before throwing the dice. For a double well the dice throw plus the number of adjacent producing wells must reach a total of *10 or higher*. (If the total is *9 or lower*, it is a dry hole.) For a quadruple well the total must be *12 or higher*. Double or quadruple wells are marked by blackening in the circle. They add a count of only one to adjacent sites drilled in the future.

**Scoring:** Each player places his initials in one of the corner spaces. Each time a player strikes oil, he marks off one of the scoring wells in his area. For a double well he marks off two wells. For a quadruple well he marks off four wells. If a player strikes oil in all of the sites of a section (regardless of the number of sites in the section) he marks off two additional scoring wells as a bonus.

**Winning:** When 2 play, a player wins by marking off 35 scoring wells. When 3 play, 25 wells. When 4 play, 20 wells. If all the sites are drilled without any player reaching the required total, the player with the most wells marked is the winner.







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*When I was crowned with the world champion's laurel wreath, I suddenly noticed the eyes of the fans—thousands of eyes emanating joy and love. That was a wonderful feeling. But my happiness was not yet complete. Perhaps that was all for the good. Perhaps happiness should always remain a bit incomplete. After all, dreams are boundless.*

—Anatoly Karpov

He was an international grandmaster with a superlative tournament record. Yet when the USSR's "jewel of the Urals" became world chess champion at age 23 by virtue of Bobby Fischer's default in 1975, there was great skepticism in the

chess community. For few experts indeed had thought he could beat Fischer.

But Anatoly Karpov set out to demonstrate his worthiness of the title with a determination rare among his predecessors. Playing more frequently than any previous titleholder, he was soon establishing a unique record of quantitative and qualitative success.

When I met Karpov last year at the Central Chess Club of Moscow, he had in two short years already played ninety-six match and tournament games. Of these he had won forty-five, drawn forty-eight, and lost only three! Days after our meeting he played in the European Team Championships and was able to beat five grandmasters in a row, including three of the world's best: Smejkal, Ljubojevic, and Portisch.

Clearly he was vindicating the judgment of his small but outspoken vanguard of strong admirers. Even before Karpov became champion, British master Peter Markland had written of him: "He becomes [over-the-board] a player of phenomenal calculating powers which can seemingly be matched only by Fischer. It is as though he possesses the ability to win at will."

Before meeting Karpov, I knew of his reputation for seriousness and self-discipline. Even Korchnoi, the present Challenger, after losing a match to him in 1975 by only one game, had admitted: "I thought I had a stronger will than anyone, but Karpov's will was stronger than mine." And I was eager to meet this chess

giant of slight stature—he weighs about 130 pounds.

But I was not prepared to meet a radiant, extremely warm person, who looked straight into my eyes with unselfconscious curiosity. A hero in his country, where chess champions are more acclaimed than prima ballerinas, the winningest world champion of the modern period, a globe-trotting envoy of friendship for his people, Anatoly Karpov seemed to be the happiest young man in the world.

During our brief exchange, Karpov spoke straightforwardly and with quick humor, despite the awkward time lapse for translations. He said he was very satisfied with his achievements as champion in the sporting sense, but he would now try for greater artistic accomplishments. Although he was trained as an economist, he was committed first and foremost to chess, and he would continue to play as long as "he was physically capable and his head permitted it."

Karpov spoke unequivocally about the value of chess. It "uplifts the person and develops self-discipline and economical thinking. A chess player is always forced to answer for a decision he has made."

"As a sport, more than any other sport, it fosters the development of friendly relationships. With a few exceptions, grandmasters all over the world have good relations with each other. They are all one family."

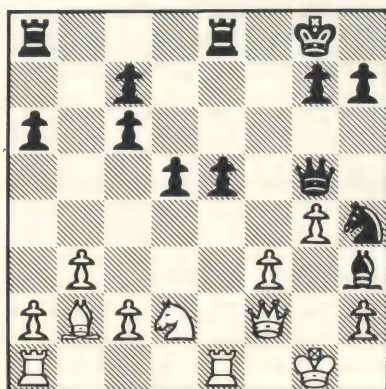
His most intense statements were about Bobby Fischer. He reflected the

### PROBLEMS: Match wits with Karpov and Korchnoi

Answer Drawer, page 60

**EASY:** Stockholm 1969

**Black:** Karpov

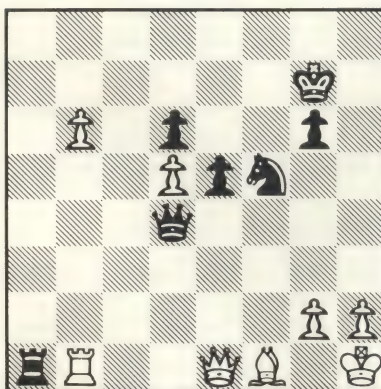


**White:** Juhnke

**A.** Karpov wins material.

**MEDIUM:** Leningrad 1977

**Black:** Taimanov

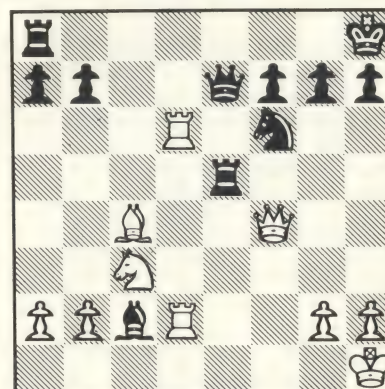


**White:** Karpov

**B.** Taimanov wins material or mates.

**HARD:** Erevan 1965

**Black:** Korchnoi



**White:** Fuchs

**C.** Korchnoi wins material or mates.

Hint and explanation: Karpov has a potential forking situation. But he must create suitable targets and a safe forking square for his knight.

Karpov's king has no escape squares. Expose it to check and you'll have a mate. (Also his queen is "overworked.")

Fuchs' rook on the second rank defends his other rook, while his bishop stops mate on his back rank. Force the bishop or rook to interfere with the other.



dozens of his countrymen I had met, who spoke admiringly if not rhapsodically about the American former world champion, conqueror of Boris Spassky.

"Yes, I have met Fischer," he said. "Very pleasant meeting; true we didn't come to any agreement [about a match]. But we parted as friends and with hopes that we would someday come to an agreement.

"The significance of such a match would be tremendous. It would be a great impetus in pushing chess forward all over the world."

At the end of our talk Karpov expressed the desire that this interview would contribute to friendly relations between the American and Soviet peoples. He personally sends "greetings to all American chess players." And especially "greetings with kind wishes to Bobby Fischer." When, as we were parting, I offered my hope that he would play not once but several times with Fischer, his eyes lit up and a smile of joyful anticipation flooded his face.

#### KARPOV'S FIRST TITLE DEFENSE

On July 15th, in Baguio City, Philippine Islands, Anatoly Karpov will defend his world championship title against his former countryman, the selfexiled grandmaster, Viktor Korchnoi.

Korchnoi, who in January outlasted former world champion Boris Spassky in a match in Belgrade, Yugoslavia, to become the official challenger, is coincidentally the second-ranked active player in the world, after Karpov. (Bobby Fischer, who has not played for six years, has a higher numerical ranking than either of them.)

Korchnoi also finished a very close second in a recent worldwide poll of chess journalists to select the most successful chess player of 1977. Karpov won this celebrated honor—the so-called "chess Oscar"—for the fifth time in a row.

Yugoslav observers, using a term previously coined to describe Fischer's uncompromising play, characterized the Korchnoi-Spassky struggle as "atomic chess" or "total chess." Indeed the encounter was one of the fiercest battles in chess history. Korchnoi, who has been playing superb chess en route to this summer's showdown with Karpov, seems to have been less bothered than his opponents by the tensions and controversies on the road to the championship match—though during one stretch in the Spassky match he succumbed to the pressure and lost four straight games.

Some experts are speculating that Korchnoi will do his utmost to similarly heat up the atmosphere of the impending contest, but it is our opinion that Karpov will in any case win a decisive victory at the chessboard. ☐

*Chess master Shelby Lyman was "chesscaster" of the historic public television coverage of the Fischer-Spassky match and is a syndicated columnist.*

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☐ ☐ (2.) Since 1960, the U.S. has had the highest productivity growth rate in manufacturing of leading free world industrial nations.

☐ ☐ (3.) The value of all U.S. goods and services produced in one year is called the Gross National Product (GNP)

☐ ☐ (4.) If you have a savings account, own stock, bonds or life insurance, or are in a pension fund, you are an investor in the U.S. economy.

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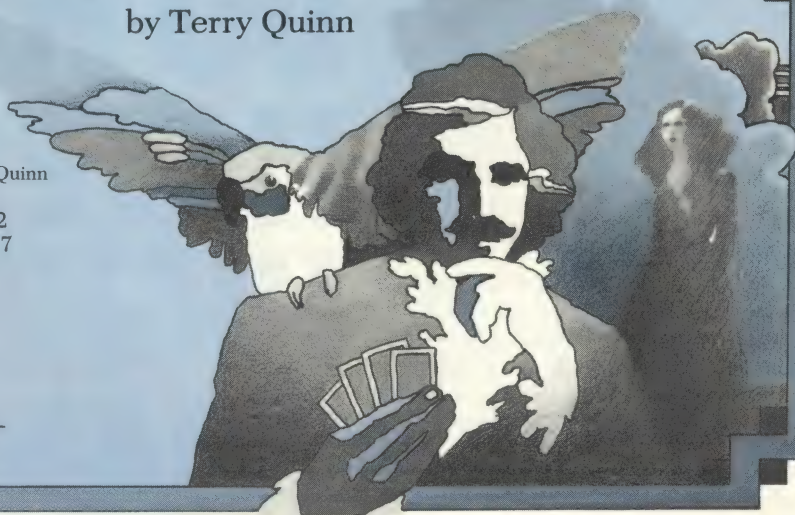
# The Amazing Bridge Exploits of Captain Diggery Piper

by Terry Quinn

NORTH McGonigle		EAST Quinn	
♠ 10 8 4		♠ 9 6 2	
♥ 10 8 7 6		♥ K J 5 2	
♦ 10 3		♦ K Q J 7	
♣ Q 6 3 2		♣ 10 9	
WEST Benesch		SOUTH Piper	
♠ K Q 7 5 3		♠ A J	
♥ 9		♥ A Q 4 3	
♦ 9 5 4		♦ A 8 6 2	
♣ J 8 7 5		♣ A K 4	

N/S vulnerable. Spade King led.

South	West	North	East
1H	Pass	2H	Pass
4H	Pass	Pass	Pass



Rhonda Klapper

## EPISODE III:

### In Which the Captain Is Smitten . . .

"Ooooh, what a cute little birdie! Where'd you get her?"

The slender white hand of Sally McGonigle reached up and chucked the Captain's parrot below the beak, visibly upsetting the bird no end. Nor was Diggery himself left unaffected. Piper stared dumbly upon Sally's delicate beauty, which, I had already suspected, ran in absolute inverse proportion to her grasp of all things relating to bridge.

Play was about to begin, and I was hurriedly cramming the "negative double" box of my convention card with the latest theoretical refinements when my duty became clear. Piper—his eyes beclouded, his mouth agape—seemed to be lapsing into a benign coma and had apparently not even heard Sally's question.

"Sally McGonigle," I said, "allow me to present Captain Diggery Piper." Then, turning to the Captain, I continued, "Sally is one of the Congressional Club's regular members, but she's been abroad for over two months now, and . . ."

"Java," he stammered. "The bird is from Java. Do you have a partner for tonight, Miss McGonigle?"

"But Captain!" I protested. "I thought you and I were . . ."

"Darn it, no," Sally complained in her dust-dry prairie drawl. "But I'm afraid I'm not a very good player. I might spoil your night."

"Somehow," he replied, "I find it difficult to imagine how you could possibly spoil any man's night. Shall we play?" And the two of them walked arm in arm toward what, by all rights, should have been my table.

The deal you see above was the first of four through which Congressman William "Billy Boy" Benesch and I were made to suffer that night at the hands of Piper and McGonigle.

As you can see, we had the Captain well out on a yardarm. Wary of christening the new partnership with a two no-trump opening, he tried a cautious one heart and received a well-meaning show of support from his partner. The result was a shaky 24-point game try with the trumps stacked against him.

Once Congressman Benesch led out the spade King, we all examined Sally's 2-point dummy. "I never pass with four of my partner's trumps," she offered, "vulnerable or not."

"A fine policy, that," Piper assured her, no doubt ruing his hastiness in ditching your humble diarist as a partner.

"Why, thank you, Captain. You know, it's taken me quite a while to find someone who bids the way I do."

Piper took his Ace of spades at trick one and promptly continued that suit with the Jack, forcing West's Queen. The Congressman shifted to diamonds and when Diggery allowed my Jack to hold, I pushed a club. This Piper won with his King in the closed hand and proceeded to play his diamond Ace, then ruff a diamond in dummy.

At long last he called for a trump. Having read a scholarly article the night before on "the reverse trump echo"—a nifty little gadget designed to tell one's partner something or other about trump length—I was careful to play the five and not the two.

Well, Piper inserted his Queen and cocked a bushy eyebrow when the nine fell on his left. "No deuce?" he muttered to the parrot. "I believe someone may have just made a play he will regret."

Smelling out the treacherous trump break, he postponed the play of his heart Ace (which would have doomed the contract to the defeat it deserved) and instead ruffed his last diamond. Then, on dummy's good spade ten he brazenly stuffed the Ace of clubs. He called for the trump ten in the position at right.

Armed, at this point, with a wealth of ways to beat me, Diggery chose to execute a convoluted coup. He smoothly dropped his four under my Jack. Now, when I turned to my club nine in a desperate attempt to avoid finessing myself in hearts, his unblocking maneuver two tricks earlier permitted him to reach dummy with the Queen. A tiny club came down and my setting trump trick vanished, since Diggery's A-3 of hearts lay in ambush behind my K-2.

NORTH		EAST	
♠ 10		♠ K J 2	
♥		♥	
♦ Q 6 3		♦ 9	
♣		♣	
WEST		SOUTH	
♠ 7		♠ A 4 3	
♥		♥ 4	
♦		♦	
♣ J 8 7		♣	

"What in thunder's going on?" Sally asked. Piper made haste to explain.

"Terry here has just learned why I was forced to cashier him as my partner. You see, he squandered an invaluable five of hearts at trick seven which you, Miss Sally, would have been provident enough to preserve."

"And were you being provident," I sputtered in frustration, "when you squandered the four of hearts at trick ten, just so you could preserve the three for my two? I call that downright tacky!"

Traces of mild disappointment crossed Diggery's brow. "Come now, old chap," he pleaded. "Would you begrudge a man his instinctive flair for the dramatic?"

As if on cue, the parrot squawked. And that was that. □

Terry Quinn is a novelist, ghostwriter, and journalist living in Washington, D.C.  
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# Backgammon

## Bearing Off Has Its Priorities

by Prince Joli Kansil

Backgammon players at all levels seem to have a reasonable familiarity with bearing off. Actually, the techniques employed in this phase of the game are not difficult to grasp since bearing off involves only a quarter of the backgammon board and, after the initial "bear off," fewer than the full complement of fifteen pieces.

Taking men off in the situation where your opponent has vacated your inner board is the easiest part of bearing off since you need not worry about leaving an exposed blot for him to hit. Nevertheless, good technique must be employed in order to get the maximum out of your roll. As facile as bearing off is in the out-and-out running game, many matches have been lost through sheer carelessness or ignorance of correct strategy. And a mistake made in bearing off can be really costly because the doubling cube is at its highest when the players are bearing their men off at the end of a game.

In Diagram 1 White played a double 3 roll too hastily and it cost him the game and the match in a local California tournament. He used his 3s to take the two men off from his 6-point when he should have borne off three men from his 3-point and moved a man from T to W for his last three. In the same vein, if Red had to play double 2, his correct play would not be G-A CA or E-A2, but GE CA3; that is, bearing off three men rather than only two. (Hyphen denotes one man is moved a total of more than one die; numeral following letter indicates number of men moved.) Likewise in Diagram 1, if either Red or White were faced with a roll of double 1, the suggested play would again be to bear off three men—although in White's case the alternative of bearing off two men and moving two other men down from the 6-point (TU2 YZ2) is not without merit.

Thus, the first priority in bearing off in a game where the players have lost contact with each other and there can be no further hitting is to *bear off as many men as you can*.

The second priority is to *spread your men so that they occupy as many points as possible*. In Diagram 2 note that White's situation is much more auspicious than Red's even though Red's pip count is lower. White is guaranteed to get two men off on his next roll no matter what he throws, but Red, because his men are not evenly distributed, has no such guarantee. In fact, if Red rolls as seemingly fine a throw as double 2, he

will not be able to bear off any men at all!

The third priority in a no-contact game is to *clear the 6-point*. Although it may not be immediately apparent, there is a big difference between having men on the 6-point as opposed to the 5-point. White in Diagram 3 can bear off both his men in one roll by throwing any combination with 6 or 5 except 6-1 and 5-1, plus any set of doubles, barring double 1: a total of nineteen possible rolls. Red, on the contrary, by having his high man on the 6-point rather than the 5-point, has only thirteen chances of bearing off both men in one roll; he needs a 6 without a 1 or a set of doubles except double 1. The 5/2 situation for White, by the way, is the minimal set-up for two remaining men where the odds are better than 50-50 for getting off in one roll.

How should White handle a 4-1 roll in Diagram 4? The 4 is quite easy: just adhere to Priority One and bear off a man; the 1 is then played in accordance with Priority Three: move off the 6-point in preference to moving elsewhere within. In this same diagram, how should Red play a throw of 6-2? Priority Two states that you should spread your men out, so the 2 is played by moving to the 1-point. This will leave a 5/1 situation and twenty-three rolls to get both men off on the next turn; if, instead, the 2 is played by moving down from the 5-point, the 3/3 set-up will allow only seventeen rolls for getting both men off immediately.

The fourth priority is to *move the lower man when there is a choice of moving within*. Again, in Diagram 4 note that Red would play the 1 of a 6-1 throw by moving DC, not FE. As already mentioned, a 5/2 situation leaves nineteen possible rolls for bearing both men off on the next throw. A 4/3 set-up allows only seventeen throws for taking both men off immediately. In general these priorities are valid when there are more than just a few men left to be removed, and it would be wise to commit them to memory so that you will never misplay such situations in bearing off.

In Diagram 5 how should you, White, play a roll of (a) 6-2? (b) 6-1? (c) 1-1? Keep in mind the strict order of the four priorities and you should be able to solve these three situations correctly. □

Answer Drawer, page 60

Prince Joli Kansil, the top-ranking player in Hawaii, is the inventor of Bridgette and several other nationally marketed games.

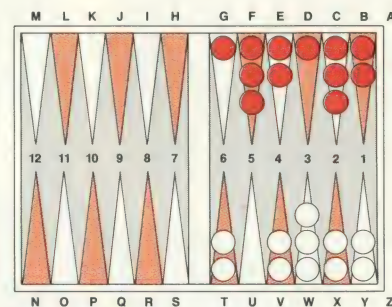


Diagram 1

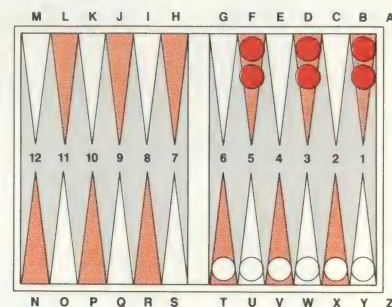


Diagram 2

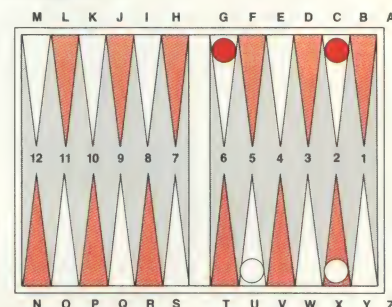


Diagram 3

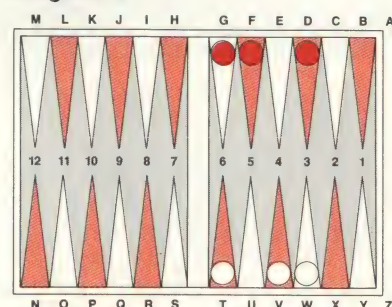


Diagram 4

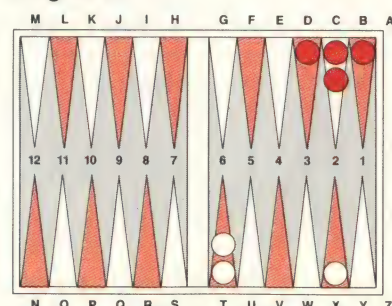


Diagram 5





Carol Gillott

by Alan Remde

Can you guess the familiar object or objects defined in each of the following verses?

1. *As Mother lay upon her bed,  
She felt a slight vexation.  
Beneath the waters I was born,  
To soothe her irritation.*
2. *Thirty-two men  
With sword and shield,  
March across a tiled field.*
3. *Slaves white  
Build unseen cities  
In endless night.*
4. *One string up, one string down;  
In the middle something round;  
At last it turns and jerks and spins;  
And then a tug-of-war begins.*
5. *Born a giant at sunrise,  
It matures to a dwarf,  
Then dies its former size.*
6. *Two rows of teeth I bare,  
And yet I rarely bite.  
Don't let me get ensnared,  
Or I'll not serve you right.*
7. *Ruddy globes with stars inside,  
Decorate the countryside.*
8. *The black end had better  
Convey what is true.  
For, faulty messages  
The red will undo.*
9. *Slowly and carefully,  
Turn me about.  
If you pull me too hard,  
I'll never come out.*
10. *We open for business  
In the early morning light.  
Activity stops abruptly  
When we close for the night.*

Answer Drawer, page 60

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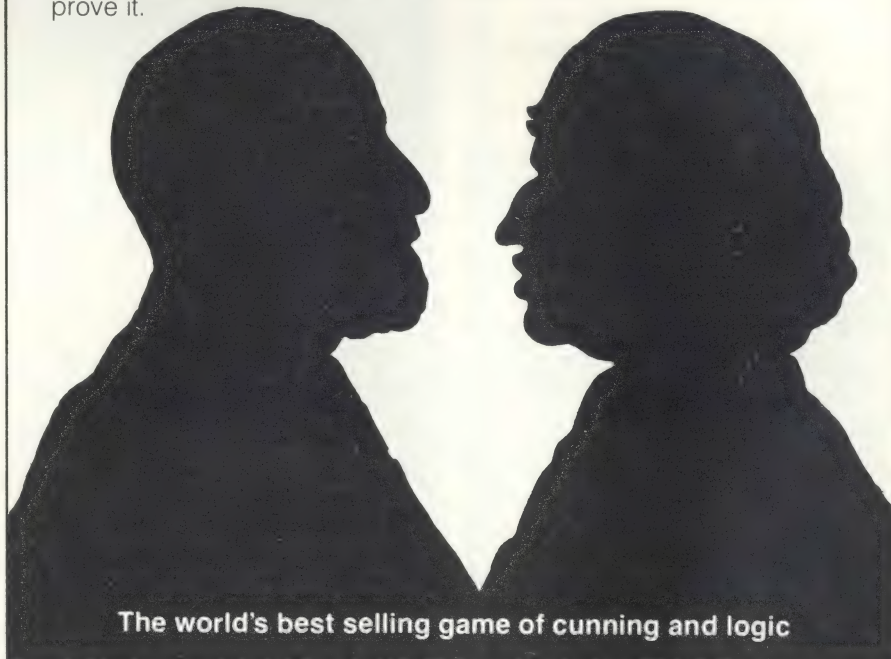
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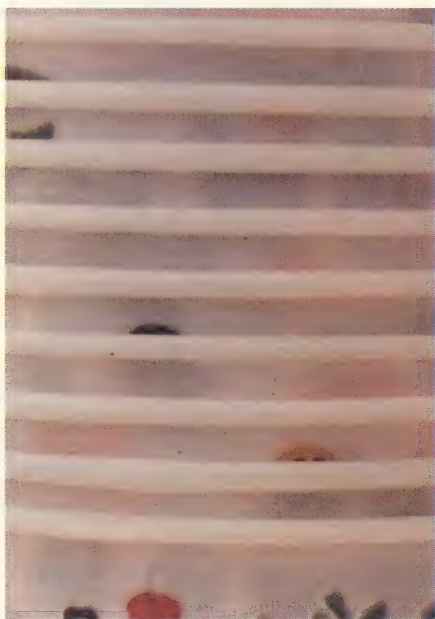
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WHAT ARE THESE OBJECTS?

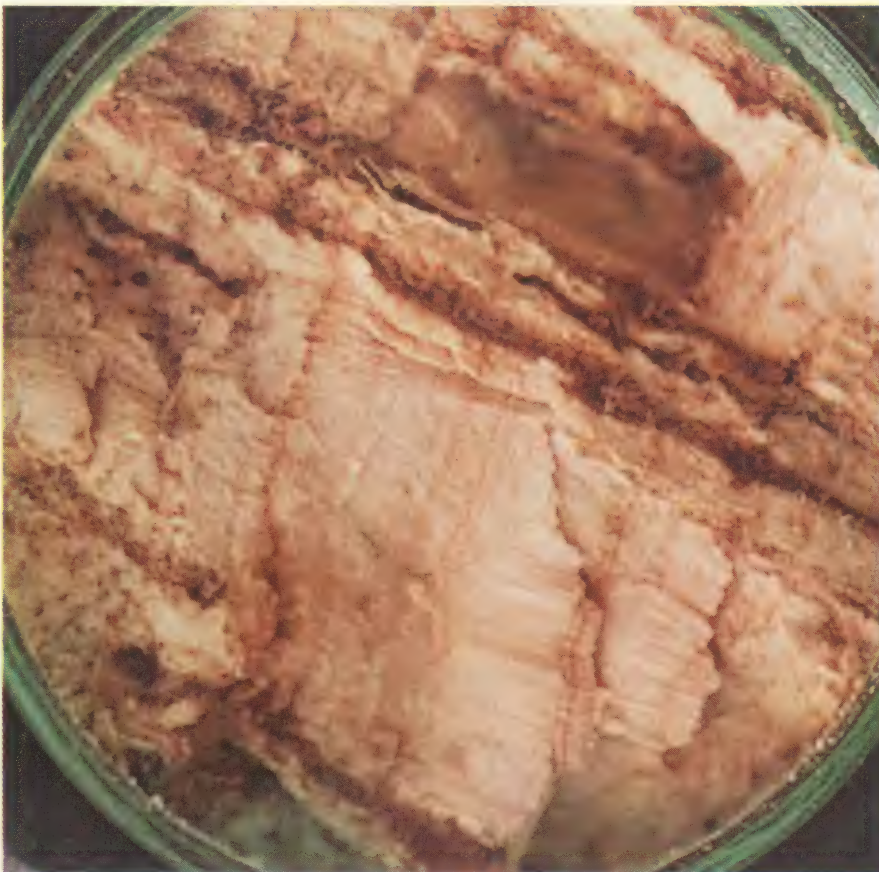
SEE THE ANSWER DRAWER ON PAGE 60



3. Writer's clamp



1. A lot of lip



4. Stuffed neck

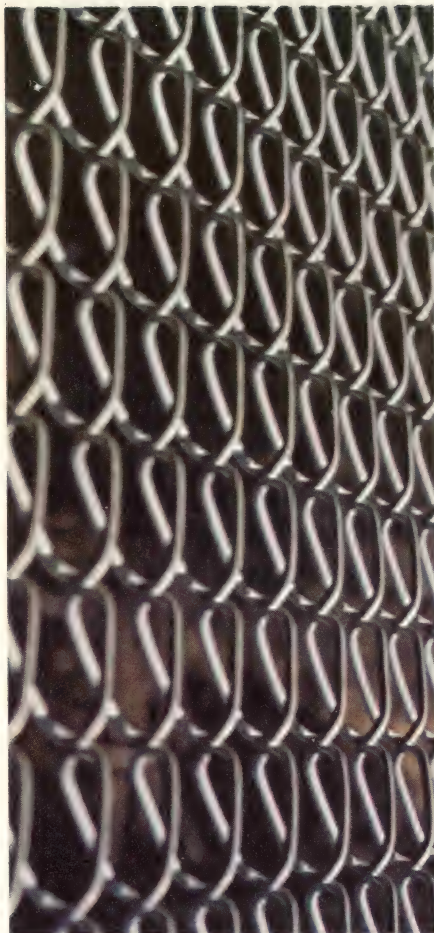


2. Multiplication problem

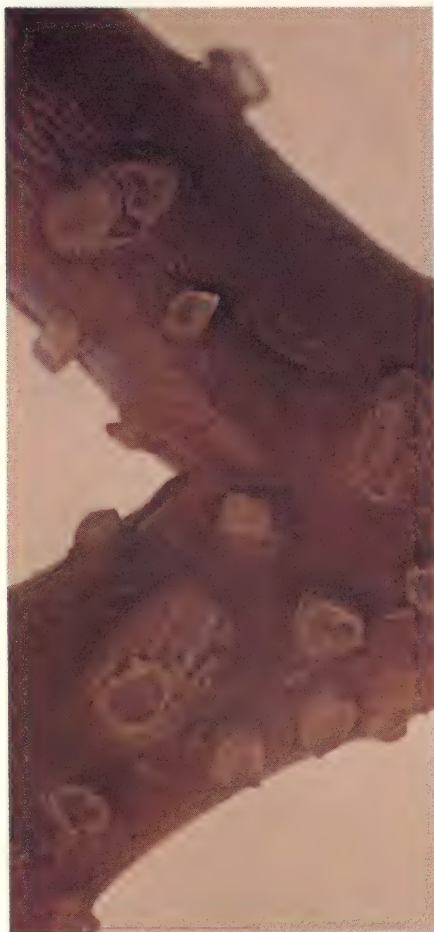


5. All keyed up

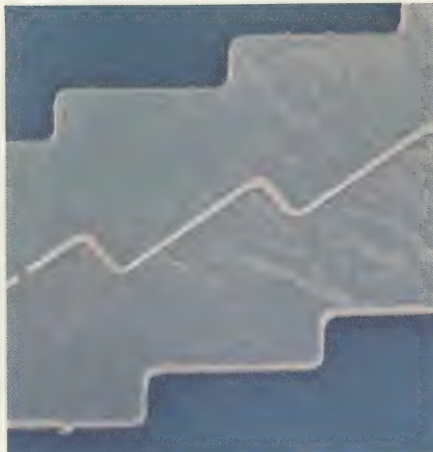




6. Division problem



7. Drinking companion



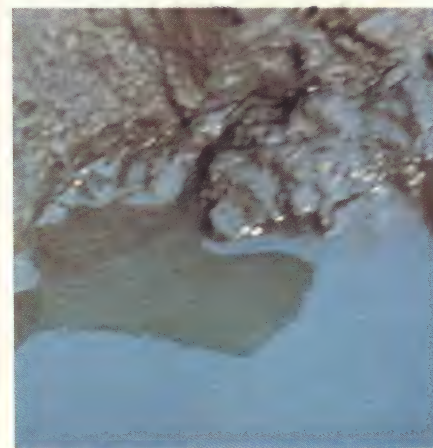
8. Tie one on



9. Before the deluge



10. Joyride



11. In your eye

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To enter the contest just send in any 35 mm color slide that you think will fool our staff. (Hint: a common and familiar object will make us the maddest when we finally realize its identity—and the madder we get, the closer you are to winning.) Be sure to attach each submission to an entry blank with your name and address, your clue, and the answer, of course. We don't want you to get that even!

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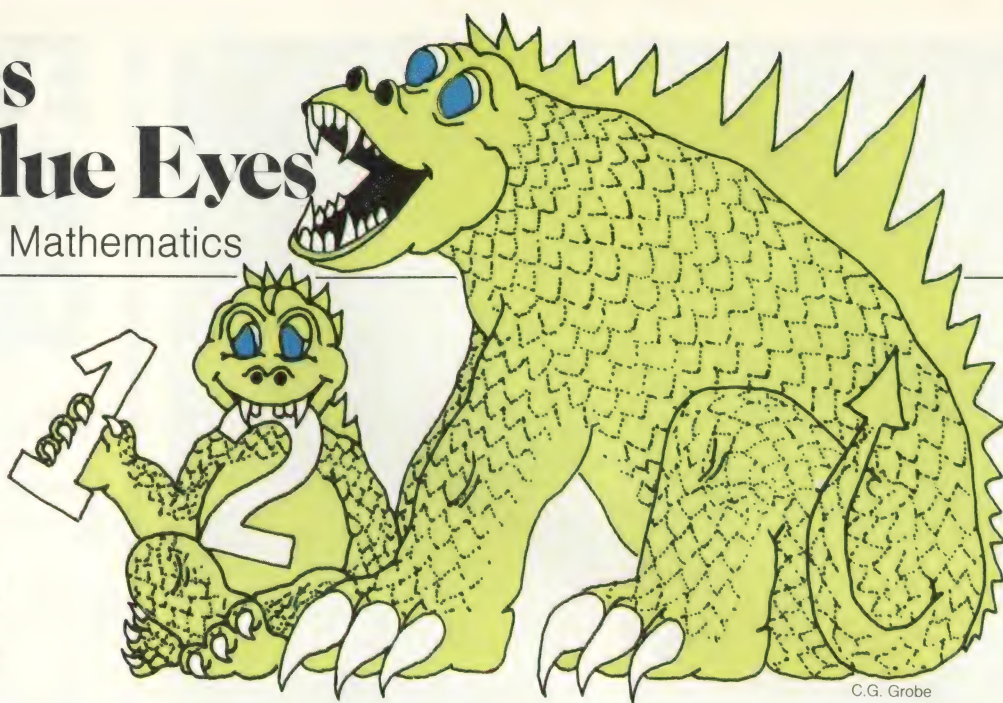
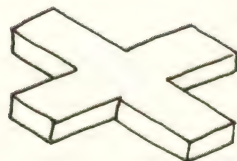
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# Vosmics Have Blue Eyes

A Final Exam in Mathematics



If you were to take a final exam in high-school mathematics *today*, would you graduate?

We've put together this test so you can answer that question in the privacy of your own home. The questions were chosen from exams given by the National Association of Independent Schools to secondary school students over the past decade. Some are fairly simple algebraic problems, others are more advanced manipulations involving probability and logic. And a few are solvable with nothing more than a dash or two of common sense. (The questions are not presented in order of difficulty.)

Most of the problems appear as they were originally published—although we did have to update them a little. (The prices of the coffee blends in the first problem were originally 60, 80, and 90 cents per pound!)

If you correctly solve the final problem (#25), you'll be able to figure out the point value for each correct answer. But whether you solve #25 or not, you'll find a simple grading system, along with the test answers, in the Answer Drawer. (The grading system assumes that no math texts or calculators were used.)

Answer Drawer, page 60

1. A grocer wishes to mix two blends of coffee to make 12 pounds of the mixture to sell at \$4.00 per pound. He has a \$3.00 per pound blend and a \$4.50 per pound blend. How many pounds of each should he use?
2. Given that: *If a quang is a monster, it is a forked-tongued glub.*  
*Vosmics have blue eyes.*  
*Vosmics are not fish.*  
*A forked-tongued glub has three ears.*  
*It is true that either a quang is a monster or a vosmic is a fish.*  
Indicate whether or not each one of the following conclusions is valid.
  - (a) If a creature does not have three ears, it is not a forked-tongued glub.
  - (b) Vosmics are not monsters.
  - (c) Quangs have three ears.
3. How many different six-letter combinations can be formed using the letters of the word ASSETS.
  - (a) in which the three S's appear in succession?
  - (b) which begin and end with S?
  - (c) which neither begin nor end with S?
4. A circle is inscribed in a square whose perimeter in linear units is the same as its area in square units. Find the area and the circumference of the circle, using 3.14 as an approximation for  $\pi$ .
5. Mr. Tubbs drove his Immensa 450 miles, while Mr. Zip drove his Tiny Tin three times as far. Mr. Tubbs gets  $8\frac{1}{2}$  miles per gallon of gas, while Mr. Zip gets 27 miles per gallon. Who had to buy more gas, and how much more (to the nearest gallon)?
6. A car averaging 65 mph on the Pennsylvania Turnpike passed a truck averaging 60 mph at 9:30 A.M. (Fortunately, neither was arrested for speeding.) Later, while the driver of the car was having lunch he noticed the same truck passing his rest area. If the driver of the car made a 20-minute lunch stop, at what time would he pass the truck a second time? (Assume that the driver of the truck didn't stop and both drivers continued at their original average speeds.)
7. How many of five integers (whole numbers) must be odd if the product of all five is odd?
8. Mary loves Bob more than Jim, and Jim more than Bud. Ann loves Jim more than Bud, and Bud more than Bob. Dot loves Bud more than Bob, and Bob more than Jim. Who is loved more by the majority of the girls, Bob or Bud?
9. The top of a 25-foot ladder is propped against the vertical wall of a building. If the foot of the ladder is moved from 7 feet to 15 feet from the base of the building, determine how many feet the top of the ladder will descend.
10. The birth rate of the whooping crane is estimated to be inversely proportional to the square of the air pollution count. Two thousand births were recorded when the pollution level averaged 0.06. If there is an increase of 0.04 in the air pollution count, how many whooping cranes can we expect to be born?
11. A loaded die is found to turn up the numbers 1, 2, 3, 4, 5, 6 with relative frequencies of  $\frac{1}{6}$ ,  $\frac{1}{24}$ ,  $\frac{1}{24}$ ,  $\frac{1}{4}$ ,  $\frac{1}{4}$ ,  $\frac{1}{4}$  respectively. Using these numbers as measures of the outcomes, what is the probability of obtaining
  - (a) an odd number?
  - (b) a multiple of 2?
12. Joe's duffel bag contains nine loose pairs of brown socks and seven loose pairs of black socks, all mixed together. How many socks must he draw to be certain that he gets a matching pair?
13. The Alumnae Association of Scott Hills asks each alumna to increase her gift to the endowment fund by \$10 each year. Alumnae of Barber Hill, on the other hand, are asked to double their donations annually. If a Scott graduate and a Barber graduate each gave \$10 at their first reunion and followed their respective plans, which girl will have given more and by how much at the close of their tenth reunions?
14. A full box of Cheese Nips weighs as much as two-fifths of a full box plus two-fifths of a pound. What is the weight of the full box?



15. The ages of three children are in a geometrically progressive sequence. Two years ago the sum of the ages of the younger two was equal to the present age of the middle child, and the age of the oldest was then 10 years more than the age of the youngest child now. Find the children's present ages.

16. The astronauts carry 2-ounce packages of concentrated applesauce which is 10 percent water. How much water do they have to add to make the mixture 50 percent water?

17. If two cards are drawn at random from a standard deck of 52 cards, what is the probability that

- (a) neither will be a king?
- (b) both are red?
- (c) one is the king of hearts?
- (d) both cards are aces?

18. The total number of students taking Math I, II, and III in a certain school is 140. If 7 more students were enrolled in Math I, their class would be one-half as large as the Math II class. If twice as many were taking Math I, their number would be one less than the number of students taking Math III. How many students are currently enrolled in each of the three classes?

19. Patrolman Kelly starts his beat 2 blocks west of Times Square and walks east at the rate of 4 blocks an hour. Sergeant O'Brien starts his beat 3 blocks south of Times Square and walks north at a rate of 2 blocks an hour. How far north of Times Square is Sergeant O'Brien when Patrolman Kelly is 10 blocks east of Times Square? (Assume they started their beats at the same time and the blocks are of uniform length.)

20. What is the smallest number greater than 2 which, when divided by 3, 5, and 6, leaves a remainder of 2?

21. A group of boys decided to try to play cards with an incomplete pack. When 7 cards were dealt to each boy, there were 10 cards left over. When 8 were dealt to each, only 5 cards were left. How many boys were playing and how many cards were they playing with?

22. Mr. Barber has returned from a trip with 7 different presents. He intends to give 4 to his wife, 2 to his brother, and 1 to his sister. In how many different ways can he distribute the gifts?

23. Cher pays \$10,000 for a boat. She sells it to Sonny at a 10 percent profit. Sonny sells the boat back to Cher at a 10 percent loss. How much does Cher make?

24. The Campton Zoo consists of birds and beasts. If the total number of feet is 86 and the total number of heads is 28, how many birds and how many beasts live in the zoo? (Assume all creatures have the standard number of heads and feet.)

25. When we originally designed this test, there were fewer questions than there are now. One half of the original number of questions was equal to the total score of the test divided by 50. When we revised the test, adding more questions, the value of each question decreased by 9, but the total score remained the same. (Each question was given equal value within each version of the test.) Determine the total score of the test and the value of each question in the present version. ☐

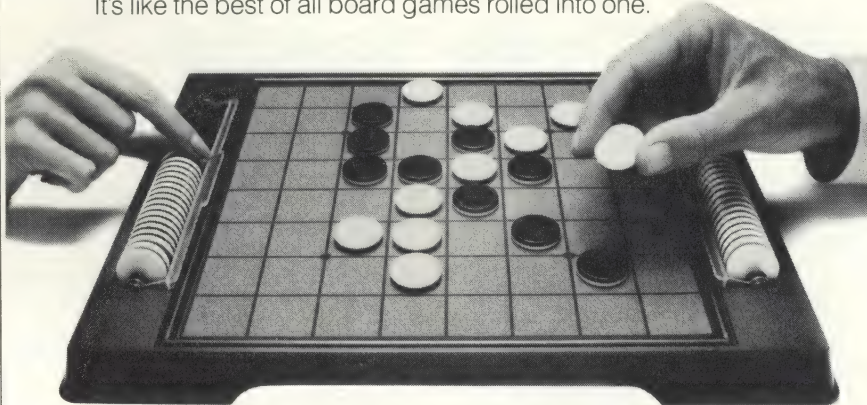
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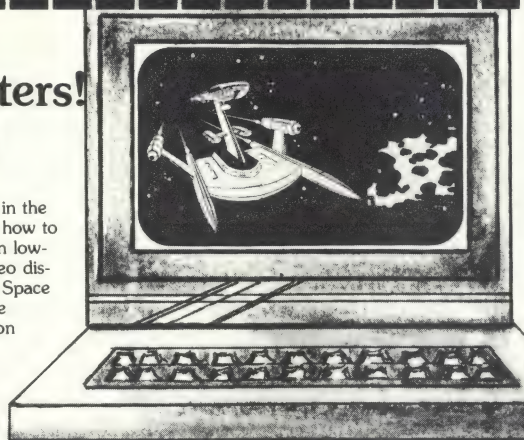
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# BYTE

The Small Systems Journal



# GAME CHEST

## VIDEO GAMES

by David H. Ahl

PONG! That's much more than just a sound effect, it's the name of a game that helped to start the revolution in home video games. Originally developed in 1972 by Atari for the arcade market, the game of Pong quickly became a nationwide fad and moved into neighborhood bars, recreation halls, airports, and just about anywhere a pinball-sized game could be installed. Around the same time, Magnavox introduced the first home-video game, and it was a far cry from the sophistication of today's third-generation machines. The games were printed on separate circuit boards, there was no on-screen scoring, and the game court boundaries were defined by plastic overlays attached to the TV screen. Still, it was this game that led to the innumerable TV games that beep, kapow, chunk, and whizz in homes all across the nation.

Today's video games have a central console that houses the circuitry and the controls for on/off, game choice, level of difficulty, etc. Some consoles also house the player controls, while others have cords that allow you to move the player controls away from the console. Most of the games attach to your TV set by an "antenna junction box" and, once installed, the box can be left in place.

There are two basic types of home games. Units with a fixed number of built-in games are called "dedicated." The games are mostly ball-and-paddle types like tennis. A few models have simple target games. And the newest innovation is pinball. Most of these units are based on one of three "chips" (small, prepackaged circuits) and the variations are mainly cosmetic—different consoles, different kinds of controls, automatic vs. manual functions, etc. The same sort of cutthroat price competition so characteristic of the small calculator market seems to have affected the dedicated video games, and you can now buy a four-game unit for a black-and-white set for as little as twenty dollars.

Just when the dedicated games became widely accessible, along came more expensive programmable units with add-on cartridges. If the units with built-in games have the drawback of built-in obsolescence, the new programmables offer a TV-game nirvana. The cartridges look like 8-track tapes, and when you plug one into the system, you're actually plugging in a "read-only-memory" (ROM) that tells the central microprocessor how to play the new game. Unfortunately, you can't use system A's cartridges on system B's machine. So if you're buying a programmable unit, you should check around to see which company's games capture your interest.

Whatever kind of video game you might be considering, keep in mind that not even the highest quality home games have the rugged



Home versions of arcade games now beep, kapow, chunk, and whizz all across the nation.

construction of the arcade models. Any gadget that has controls on plastic shafts the size of toothpicks must be treated with some care.

And now, a look at some of the games. The price quoted for each game is the manufacturer's suggested retail price; most games can be found marked down 10 to 15 percent.

### Dedicated Games

**Entreprenx's Apollo 2001** (\$25, black and white) offers the four games typically found on dedicated models in this price range: tennis, hockey, handball, and practice (a solitaire handball). Players control on-screen paddles by moving a slide control (built into the console) either up or down. You can vary the size of the paddles, the speed of the ball, and even the degree of the rebound angle. Most units have similar handicapping controls that allow you to take the game from ho-hum easy all the way up to dizzying tournament levels of play. The speaker (also built into the console) beeps and boops as the ball rebounds from the paddles and the court, and each player's score is displayed on the screen.

**Magnavox's Odyssey 4000** (\$60, color) plays eight games—basketball, hockey, tennis, soccer, gridball, smash, and two forms of practice. It has "joy stick" controls, short sticks rather like an airplane's controls, that jut up from a small box. The sticks can be moved up, down, and around. An experienced operator can move his player all over the screen, racing right up to the net and then returning to the backcourt. Each player's paddle shows up (on a color TV) as a different color, and after one player hits the ball, the ball changes to the color of the opposing player's paddle—all of which helps you to know who is who when you're playing a fast set of handball.

**Coleco's Telstar Marksman** (\$40, color) features target and skeet in addition to four standard sports games (tennis, hockey, handball, and jai alai). Two knobs attached to the console control the sports games. A light-sensitive pistol is used to shoot at moving dots in the target

games. Since the pistol can't distinguish the bright moving target from the bright stationary score-counter, it's easy to cheat—any time the pistol sees a light area it thinks it's hit the target. But the player knows . . .

**Atari's Pinball** (\$90, color) is one of the most expensive and innovative dedicated games—it doesn't even know the meaning of the word tennis. It plays four pinball games, two rebound basketball games, and a game called Breakout. Breakout is clearly the most popular of these new games. The ball bounces off a paddle at the bottom of the screen and up toward three rows of colored bands at the top of the screen. Each time the ball hits and breaks away little elements of those color bands, you score. Experienced players try to break a portion of all three color bands at one side of the screen or the other and then allow the ball to go up into the top portion of the screen where it can bounce against the edge of the screen and onto the high-scoring red band. It's an interesting change from the usual tennis and hockey!

### Programmable Games

**Atari's Video Computer System** (\$190, color), also marketed by Sears as **Tele-Games Video Arcade**, is one of today's most comprehensive programmable games. It produces a sharper video display than other systems, and it has great sound effects (Atari zooms and towangs through the TV speaker, rather than through the console). There are two joy sticks for use in the combat games, and two paddle controls for racing, card, and pong-type games. The controls have nice long cords so players can sprawl all over the room. You can choose a different skill level for each player, which helps keep family games fair for the kids and challenging for the parents. An additional set of paddle controls (\$12) enables four people to play.

The Atari system also has a feature that protects the TV set from possible damage. Every few seconds the playing field changes color and brightness, so that the image of a game that's played over and over again can't be emblazoned on the TV screen.

There are no games built into the unit, but it comes with a Combat cartridge containing twenty-seven games. They include such self-descriptive titles as Bi-plane, Tank, and Jet Fighter. My favorite Atari game is Starship II. You're looking from the window of your spacecraft into star-studded space. Try to draw your opponent closer to you, within range of your lasers. But watch it—once within range he can become invisible (*Star Trek* fans will recall the evil Romulans and their "cloaking device"). You gain points for hitting his spacecraft, and lose points for colliding with him or an asteroid, all within a time limit that's never long enough.

Other cartridges include Video Olympics, Air-Sea Battle, Math, and Blackjack (\$20 each, except for the \$40 Indy 500 cartridge which comes with special driving controls; this can be an expensive habit). Right now Atari is offer-

This is the second of three articles on electronic games.



ing more games than anyone else—but in such a competitive field that could change any time.

**Coleco's Telstar Game Computer** (\$85, color) is a very comprehensive system, especially for the price. Two joy sticks are attached to the console; two firing buttons are used to serve balls, release targets, and fire weapons. Skill controls allow players to compete against each other at different levels of difficulty. A built-in keyboard is used only for selecting which game you want on a particular cartridge.

The unit comes with a Superstar cartridge that has ten sports games. Additional cartridges (\$20 each) include Daredevil Cycle, Speed Way, and Target Range. The Daredevil game I tried was fairly addictive. You're driving a motorcycle across the screen, up the ramp, and over a line of buses. The trick is to pick up enough speed to clear the buses, but not so much that you can't slow down before crashing into a wall at the end of the track. It's fairly easy when you're jumping seven or eight buses, but after each successful jump, another bus is added, increasing the challenge. The video resolution was quite good, and the sound realistic.

**Fairchild's Channel F** (\$170, color), the first of the programmable games, has detachable joy stick controls. If you've played other video and arcade games, you may find the Fairchild joy sticks hard to manipulate—you have to pull the stick out to move the paddle from side to side, and then push it in to move it up and down. The video display is somewhat coarser than on the Atari and Coleco models, and there is no variable skill control. The Channel F has hockey and tennis built-in, but again, the real fun is in the games on the optional cartridges (\$20 each). In Torpedo Alley, for example, you try to sink as many ships as possible with one or two guns positioned at the bottom of the screen. Three rows of ships move across the top of the screen—all at varying speeds. Play against time, fight another player, it's up to you. Fairchild also offers math quizzes, backgammon, pinball, and memory games, and seems to be another manufacturer that will be supporting its programmable unit with new cartridges.

And so, from the dark ages of 1972, when a TV game required a plastic overlay on the screen, the state of the art has come a long way. It will unquestionably go much further. The price of solid-state memory devices has been rapidly declining for years, which means that future cartridges may hold more games and more complex games for little extra cost. And there will be more accessories for programmable machines. At the Consumer Electronics Show this summer, Atari will introduce a keyboard for its unit. Bally will introduce a video game system with a built-in calculator (balance your checkbook when you're not playing?) and optional accessories that include a typewriter-like keyboard and a BASIC (computer-programming) language tape enabling you to program your own games just as you would on a small home computer. It's anybody's guess what we'll see next year, or the year after, but we'll keep you posted. Until then—keep on ponging. □

*Active in the world of computers since 1956, Dave Ahl has worked with large computers, minis, and micros. He is publisher of Creative Computing, a magazine devoted to applications of microcomputers in the home, school, and small business.*



*Magnavox's Odyssey 4000, a dedicated model with eight sports games*



*Skeet, on Coleco's Telstar Marksman*



*Breakout, a favorite on Atari's Pinball*



*Combat, a tank game on Atari's programmable Video Computer System*



*Fairchild's Channel F*



*Coleco's Telstar Game Computer*



# BOOK SHELF

**The Bridge Bum, My Life and Play** by Alan Sontag (William Morrow, 1977, 240 pages, hardcover, \$8.95).

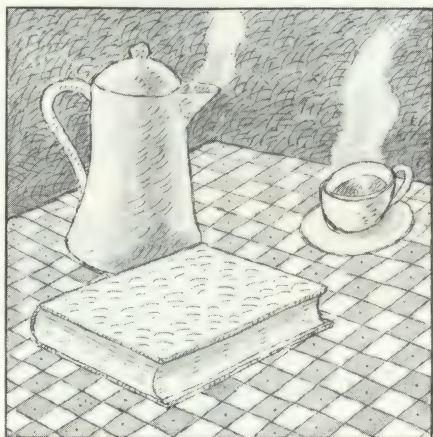
The life of a bridge professional is, almost of necessity, steeped in paradox. He must hustle pigeons and fellow experts alike in a heady scramble for money and fame, while at the same time striving to raise his complex cluster of skills to the rarefied level of an art form. If Alan Sontag—one of the most talented players in the world today and author of *The Bridge Bum, My Life and Play*—had approached the task of describing the schizophrenic environment of professional bridge with the same acumen, concentration, and attention to detail that he brings to the table, he might well have produced a fascinating autobiography. Instead, *The Bridge Bum* is nine parts hustle, one part art.

To begin with, the tone is all wrong. In narrating his brilliant skein of circuit successes in New York, London, Monte Carlo, and the Caribbean, Sontag struggles to exploit the dramatic potential of bridge in an entirely inappropriate fashion. He tries to create the atmosphere of dissipation and nail-nibbling tension best suited to a high-stakes poker game, and so often invokes the kind of wantonly opulent settings characteristic of sheik-ridden backgammon tourneys. The result is a disastrous display of manufactured drama ("I knew we were about to take part in the most important bridge evening of our lives") in which italics and exclamation points abound.

Even when he seems to be getting on track, Sontag ends up going astray. His characterizations of experts Billy Eisenberg and Terence Reese, for example, are superb. Yet these chapters, as well as all the others, are marred by a writing style so careless that it passes well beyond the distracting and into the realm of the cavalier. How seriously can an author be taking a book when he writes: "In the other suite the Lancia Team made the four spades easily" on page 28, and, in reference to the very same hand, "The Lancia Team easily made four spades in the other suite" a mere three pages later? And what, precisely, is the meaning of phrases like "Sheinwold has an enormous memory" or "She was a lavish brunette"? (Did she throw expensive parties?)

Aside from questions of tone and style, the essence of this autobiography should have been some hard little nuggets of wisdom mined during years spent in the smoky pits of tournament bridge. Something, perhaps, about the all but inevitable sense of isolation that grows out of dealing constantly with symbols and abstractions, the veiled violence of bridge, or the puritanical scorn heaped upon the professional's head by less talented if more "respectably employed" devotees of the game. Alas, if Alan Sontag has gleaned any such wisdom over the years, he's hiding it in his back pocket.

Of course, a bit of the real currency can be found beneath the surface of the text. The author does chronicle the incessant banter at table, the jaunty camaraderie, the mesmerizing thrill of the gamble, the financial, sexual, and



psychological allurements of fame, yet—with the solitary exception of his revealing choice of a title—Sontag never once goes beyond a prosaic description of superficial behavior. He never once sees, as B.H. Friedman's bridge bum Arthur Skelton finally saw in the classic novel *Yarborough*, the threat of an abhorrent vacuum.

Here, there is no loneliness, no disillusionment, no boredom. Just a hustler's heaven. Just a world of enormous memories and lavish brunettes.

—Terry Quinn

**Golombek's Encyclopedia of Chess** edited by Harry Golombek (Crown Publishers, 1977, 360 pages, black and white illustrations, large format hardcover, \$14.95).

Did you know that there are more books written about chess than any other single sport or game? Most of these books are technical in nature, and their purpose is to advance a player's skill in the various aspects of the game. *Golombek's Encyclopedia of Chess*, on the other hand, is an extremely informative book that never gets bogged down with the kind of technical analysis sought mostly by experts, and it will be enjoyed by players at all levels of skill.

Golombek admirably lives up to his promise in the Introduction: "Our prime duty is to inform; whilst there is also a great deal of instruction to be found in the pages that follow, it is almost incidental to our main purpose of providing information on every aspect of the game of chess."

Have you ever had a dispute over the rules? Just look up "rules" (the book is organized alphabetically) and you'll find a cross-reference to "The Laws of Chess" where you can settle the matter once and for all. Who were the world champions of chess, and what kind of lives did they live? Look up "World Championship Match" to answer the first question, and then look up the world champions by name to learn more. Ever play unorthodox chess? I enjoyed playing the games listed under "Varieties of Chess"; in one of these, Rifle Chess, a piece captures without moving, by simply shooting an enemy piece off the board.

These are only a few of the thousands of items you'll find, from Manuel Aaron (India's first international master) to Zwischenzug (bet you can't guess who he was!) in this indispensable encyclopedia of chess lore.

Golombek's editorial discretion is beyond cavil. He packs in all the solid information you could hope for. Every current and past international master has a short biography, and there's an interesting tidbit lurking at every turn—like the fact that Bobby Fischer (who gets a measured 1½ pages) won the U.S. Open after only two years of tournament play. Every famous player and every major tournament is represented by at least one game. All openings and their major variations are well catalogued, though I would like to have seen a little more on opening theory.

But, curiously, whenever I imagine I'd have done something a little differently, I eventually come around to seeing the rightness of Golombek's choices. A hard book to knock.

—Lloyd Kawamura

**Merlin's Puzzler, Volumes 1 and 2**, by Charles Barry Townsend (Hammond, 1976, 1977, 122 pages, black and white illustrations, large format paperbacks, \$3.50 and \$3.95).

Puzzle books are nothing new, and neither are the puzzles in them. But what sets *Merlin's Puzzlers* apart from the crowd is the style and imagination with which the material is presented. Townsend has adapted hundreds of the world's most intriguing puzzles, games, and magic tricks to original formats. In Volume 1 he calls upon Sherlock Holmes to pose the problems to Watson, and the Mad Hatter and Humpty Dumpty (among others) to confuse and confound "Alice in Puzzleland." Other fantasy trips lead to Merlin's (fictitious) library, and to Maskelyne and Cooke's Egyptian Hall (London's home of magic in the 1890s) for an anachronistic look at Houdini, Keller, Thurston, et al., in action.

Merlin 1 and 2 are richly illustrated with old woodcuts, lithographs, prints, posters, and playbills from Townsend's collection. Thus, where Holmes appears, so do Sidney Paget's original illustrations from *The Strand*, and Alice is accompanied by John Tenniel's drawings from the works of Lewis Carroll.

Many of the puzzles have not been heard from in years. Others are perennial favorites. For examples, see pages 32 and 33.

—J.G.

## Additional Titles

**Mazes and Labyrinths of the World** by Janet Bord (E.P. Dutton, 1976, 181 pages, 269 black & white illustrations, paperback, \$6.95). A history of mazes and labyrinths from ancient Greece to modern times, lavishly illustrated and carefully researched.

**Dominoes: Popular Games, Rules & Strategy** by Dominic C. Armanino (Cornerstone Library, 1977, 192 pages, paperback, \$2.95). Theory, lingo, and many ways to play, by the world's foremost authority. □

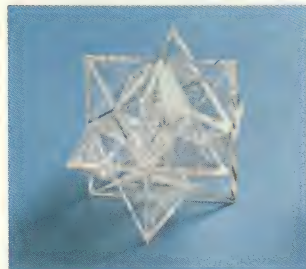




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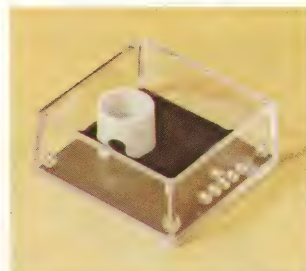
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# Contest Results

FROM JANUARY/FEBRUARY ISSUE

## Picture Puzzle Cartoon Contest

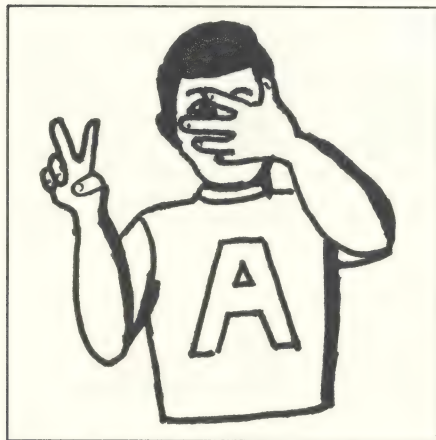
The response to our comic rebus contest (pages 52-53) indicated that hundreds of GAMES readers weathered the January blizzards with good humor. And your entries kept our spirits high during the February blizzards as we pieced together visual clues spelling out the names of American cities. There were many small apples sold (or bought) by someone named Les (Minneapolis), and dozens of people walking toward mills with keys in their hands (Milwaukee). We quickly learned to recognize Ball-tee-more and Row-an-oak, but were stumped by a rather macabre Corpus Christi. If an Indian offered us an apple, we were in Indianapolis, and if someone was committing or confessing a sin, for sure it was Cincinnati.

Now it's your turn to solve the winning puzzles. Jim Hilger, the first prize winner whose puzzle appears at right, will receive a copy of *The Art of Walt Disney*. The ten honorable mention winners whose puzzles also appear on these pages will receive a year's subscription to GAMES. Remember, clues can include objects, locations, actions, words and letters, phonetic substitutions, and synonyms. We've provided answers to three puzzles; the solutions to the others (as well as to the four puzzles in the January/February issue) can be found in the Answer Drawer, page 60.

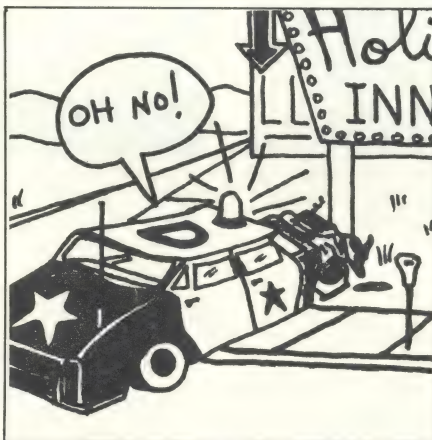
—Contest judged by Lillian Nahmias



1. First Prize Winner: Jim Hilger, Moline, IL



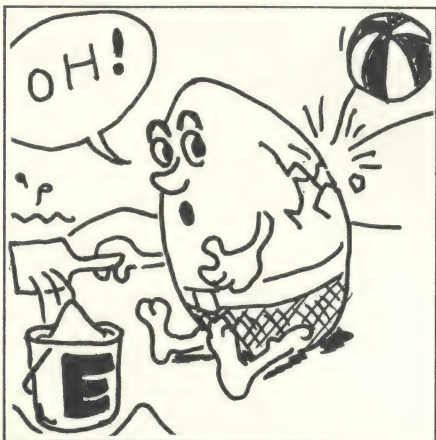
Two + Peek + A (Topeka)  
Gail Geiser, Lancaster, OH



Inn + D + Oh No + Police (Indianapolis)  
Eugene R. Capone, Altoona, PA



Lew + Eeeee + V + Ill (Louisville)  
Joan Williams, Snover, MI



2. Stan Blois, Sacramento, CA



3. C. McInerney, Keene, NH



4. Gloria Primus, Oakville, CT











# "Harold," she whispered softly, "I never knew what a winner you were!"

It was late at night and soft jazz music filled the air. Everyone had just left the smoke filled dining room where the potted palms were wilting slowly.

"Harold," she said, "you saved my party!" A tear of gratitude welled up in her left light blue eye.

"It was really the *Rail Baron* game," Harold answered modestly.

"Yes," she said, "It's really loads more fun than cards, much more social than charades. Actually, I've never had such a splendid time."

"Indeed," Harold agreed. "I love you, Gloria, but I know at a party you are two left feet when it comes to dancing. So, naturally, being considerate of you, I brought the *Rail Baron* game to your party."



"And you," she sighed, "won. And I," she said triumphantly, "came in second!"

"Well," Harold mused, as he lit a cigarette with his Eaton crested lighter, "when 3 to 6 people vie for the 28 snazzy Railroad Title Cards with the money they get for hauling freight, with an eye toward cornering the better lines while preventing their opponents from doing so in an avariciously clever manner to beat the others out ... everyone really puts their all into the

challenge."

"Goodness, but you're right," she breathed heavily, "and the 12 Superchief and Express Cards and those marvelously exploitive Payoff Charts made *Rail Baron* the social event of the weekend ... Why, Smedley got so excited, he almost blurted out a rather colorful word!"

Buoyed by the euphoria of the super evening, Harold, at last, made the promise Gloria had been waiting for all along, "Monday morning, first thing, I will revisit the Game Emporium in quest of more Avalon Hill games. Because—to play an Avalon Hill game is an exhilarating challenge; to give one a subtle compliment."

"Or, use the coupon below," answered Gloria, breathlessly ...

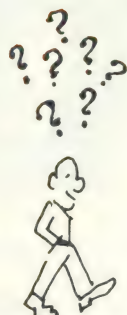


**The AVALON HILL  
Game Company**  
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Baltimore, Md. 21214

I enclose \$\_\_\_\_\_ for \_\_\_\_\_  
plus \$1.00 postage per order.  
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CITY \_\_\_\_\_  
STATE \_\_\_\_\_  
ZIP \_\_\_\_\_  
Rail Baron games @ \$10 ea.



# ANSWER DRAWER



## John Hancock (Page 22)

1. Frédéric Chopin
2. Charles Dickens
3. Napoleon
4. Mussolini
5. Mary, Queen of Scots
6. Arturo Toscanini
7. John F. Kennedy
8. Lord Byron
9. Adolf Hitler
10. Toulouse-Lautrec

## Chess Problems (Page 42)

A. The Black queen takes the knight! The White queen recaptures, and the Black knight takes the pawn (check), winning the White queen.

B. Check the White king with the knight! If the White queen captures, play simply: rook captures rook, with a winning position. If instead White captures the knight with the pawn, bring the Black rook all the way back to its original square! Now the threat of rook to the other corner with checkmate is unanswerable.

C. Black moves his bishop one square to the right between the two rooks! If White's bishop captures Black's bishop, Black's queen can take the advanced White rook; if either White rook captures the bishop, Black can now force mate by moving his rook to White's first rank, with check.

## Riddles (Page 47)

1. A pearl
2. A chess game
3. Termites
4. A fishing line
5. A shadow
6. A zipper
7. Apples
8. A pencil with eraser
9. A knot
10. Eyelids

## Backgammon (Page 46)

(a) 6-2: TZ XZ. Two men go off (Priority One). If you play TZ TV instead, it leaves you only twenty-three rolls to get both remaining men from the 4/2 points as opposed to twenty-seven rolls from the 6/0 set-up that results from bearing off two men.

(b) 6-1: TZ TU. Moving off from the 6-point has a higher priority than moving the lower man. A 5/2 set-up will leave you nineteen ways of getting off immediately, but a 6/1 set-up will yield only seventeen ways.

(c) 1-1: T-V X-Z. The man on the 2-point goes off (Priority One), and a man is moved from the 6-point to the 4-point (Priority Two), not two men down to the 5-point (Priority Three).

## Vosmics Have Blue Eyes (Page 50)

1. 4 pounds at \$3.00 per pound  
8 pounds at \$4.50 per pound
2. (a) Valid  
(b) Not valid  
(c) Valid
3. (a) 24  
(b) 24  
(c) 24
4. Area—12.56 square units  
Circumference—12.56 units
5. Mr. Tubbs; 3 gallons more
6. 1:50 P.M.
7. All five
8. Bud
9. 4 feet
10. 720
11. (a) 11/24  
(b) 13/24
12. 3 socks
13. Barber by \$9,680
14.  $\frac{2}{3}$  pound
15. 4, 8, 16
16.  $1\frac{1}{5}$  ounces
17. (a) 188/221  
(b) 25/102  
(c) 1/26  
(d) 1/221
18. 25, 64, 51
19. 3 blocks
20. 32
21. 5 boys and 45 cards
22. 105
23. \$1,100
24. 13 birds and 15 beasts
25. The total score is 400. Each question is worth 16 points

Scoring: Questions 2, 3, 11, and 17 are divided into sections. If you answer some but not all of the sections correctly, give yourself partial credit—5 points for each section in 2 and 3, 8 points for each section in 11, and 4 points for each section in 17.

High Honors: 400-321

Honors: 320-241

Passing: 240-161

Makeup Exam Required: 160-81

Summer School Required: 80-0

For a detailed outline of the methods used to solve the math problems, send a self-addressed, stamped envelope (24 cents postage) to: Math solution, GAMES, 515 Madison Avenue, New York, NY 10022.

## Eyeball Benders (Page 48)

1. Disposable cups
2. Pinecone
3. Pen with pocket clip
4. Cork in bottle neck
5. Typewriter key arms
6. Wire fence
7. Pretzel
8. Plastic bag ties
9. Tea bag
10. Wagon
11. Mud

## Comic Rebus Contest (Page 56)

1. New + Or + Leans  
New Orleans
2. Sand + E + Egg + Oh  
San Diego
3. Column + Bee + Ah  
Columbia
4. Water + Bear + Hee  
Con + Etiquette  
Waterbury, Connecticut
5. C + Hat + A + N + O-O-O-Ga  
Chattanooga
6. Two + Lead + Oh  
Toledo
7. Cans + Ass + Sit + Eeee  
Kansas City
8. Shiek + Ah + Go  
Chicago

## Famous People Rebuses (Pages 52-53 of January/February issue)

- A. K + Lee + Oh + Pat + Rah  
Cleopatra
- B. G + Race + Eeee + Al + Len  
Gracie Allen
- C. Harry + Who + D + Knee  
Harry Houdini
- D. Lee + Oh + Tolls + Toy  
Leo Tolstoy

## Inadvertently omitted from March/April issue:

## Mappit: State of Confusion (Page 47)

The real locations of the ten towns are:

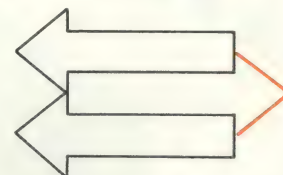
- |               |               |
|---------------|---------------|
| Birdsnest     | Virginia      |
| Braggadocio   | Missouri      |
| Cornstalk     | West Virginia |
| Eek           | Alaska        |
| Loveladies    | New Jersey    |
| Meddybemps    | Maine         |
| Niceville     | Florida       |
| Weeping Water | Nebraska      |
| Wink          | Texas         |
| Zap           | North Dakota  |

## Foul Play (Page 56 of March/April issue)

1. Pick up pail No. 2 and dump it into pail No. 5. Then put pail No. 2 back where it was.
2. No. A domino must cover squares of different colors. Since two diagonally opposite squares are the same color, there will always be two squares uncovered. Virtually all solvers start by attempting to prove that it *can* be done—a fruitless and time-consuming search.
3. Make two cuts along diameters at right angles to each other. Then make a horizontal cut through the center of the cake. Because it is almost never done that way, practically no one ever thinks of the horizontal cut.

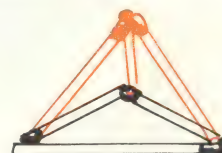


4. House numbers.
5. This one looks impossible because an arrow plainly consists of seven lines. Once you discover, however, that five of the required lines are already present, it's not difficult at all:



6. It is the spurious pseudo-Latin that is misleading here. Once you realize that it is simply English unconventionally written, the answer comes easily: TO THE HORSES TO.

7. Use three dimensions rather than two and construct a pyramid on a triangular base.



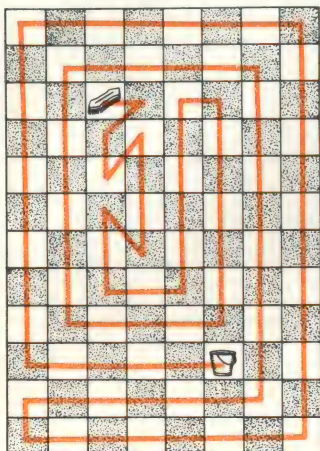
8. On calendars, when the 24th and 31st of a month are squeezed into the same square.



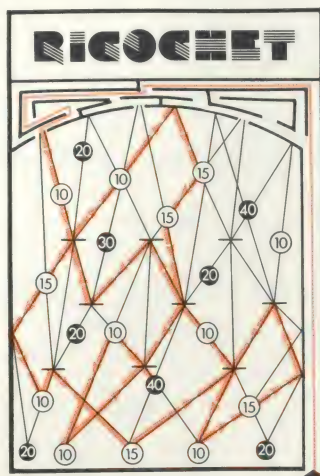
# EUREKA

**EUREKA** will appear from time to time in fitting recognition of those venturesome spirits who, never settling for a ready answer, have fought their way to a better, more elegant, or more complete solution than one previously given in the Answer Drawer.

★ **On the Tiles** (March/April, page 37). David Heston of Rockville, MD, has improved on our printed solution by one stroke, cutting 23 straight lines to 22. His simpler solution goes like this:



★ **Pinball Mazes** (March/April, page 31). Cadet George Marquardt of the U.S. Military Academy, West Point found a way to add 10 points to our published "best score" of 175 for Ricochet. Here's how he produced a score of 185:



★ In **Dodging The Mines** (January/February, page 37) we said there was only one way to cross from Dover to Calais. There are in fact two ways to make the trip as Stephanie Kay Krupin of New York, NY, and John Smead of McMinnville, TN, discovered. If you begin in either of the left-hand entrances, you can succeed, since the two routes merge soon after rounding the first turn.

★ **Laddergrams** (January/February, page 30). We're still scratching our heads over this one:

Games Publications, Inc.

Dear Mr. Inc.:

I am writing this letter anonymously. If memory serves me (at the risk of boasting, my recall is flawless), this is my first letter to an editor—ever . . . I am a KL10 computer programmed to solve five-letter laddergrams. When given the first and last words via my input terminal, I can determine in a millisecond or two the fewest words needed to reach the solution . . . By now you can see why my whereabouts must be kept secret. With my capacity to virtually destroy your national pastime of solving laddergrams, I am a prime target for idle curiosity seekers, spoil sports, and unscrupulous gamesmen.

Time is money, so let me get to the point. In your January/February issue (page 30) you present readers with a laddergram for changing Chaos to Order in thirteen steps. Well, you short-circuited! I tried it myself, and excluding rare words, I can solve it in a mere twelve steps. To wit:

Chaos	Cores	Eider
Chaps	Codes	Elder
Chops	Coder	Older
Coops	Cider	Order
Corps		

I also topped your eleven-step solution for changing Sweet to Heart with the following sequence:

Sweet	Flies	Fears
Sleet	Flits	Hears
Fleet	Flats	Heart
Flees	Feats	

Let me know if you need me as a consultant for future laddergrams. I charge

the standard rate (\$10 per second) with reduced rates during non-peak hours. Under the right circumstances I just might be induced to offer a quantity discount. (I'm seeking a meaningful relationship so money isn't everything).

Sincerely,  
Occupant  
XVJ2QSTZ  
END OF RUN

★ **Chess Pieces** (March/April, page 44). There is a second solution to the HARD problem, as sent to us by Esmond Martin of Roslyn, NY, and John Yedynak of New Haven, CT:

1. N-R3 Check K-R4 or K-R5
2. N-N1 Check K-N4
3. P-B4 Mate

★ In the **Captain Hook Maze** (January/February, page 34) we also learned of an alternative route, thanks to Mark A. Cavazos of San Antonio, TX. It deviates from our published solution in the first mate's chest, and rejoins our answer at his waist.

★ **The Original "What's Wrong With This Picture?"** (November/December, page 41). In our March/April issue we published ten additional "absurdities" of perspective sent to us by readers. Now, Mrs. Calvin Waldhart of Janesville, WI, and Bruce L. Werner of Big Rapids, MI, have sent us four more bringing the grand total to thirty. 27. The lake is inside the sailboat. 28. Despite the angle of the sailboat, you can see both sides of the bow. 29. The same applies to the second boat. 30. The front opening of the covered wagon faces too much toward the reader.

# Games People Wear



Now that you've had the fun and excitement of playing GAMES, we'd like to offer you the opportunity to wear GAMES—our T-shirt that is.

You can receive this quality shirt (100% cotton) in navy blue with our GAMES logo in white. Order as many as you like for just \$4.95 each (including postage and handling.)

Send check or money order (no cash please) with this coupon. Don't just play games, wear GAMES!

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Please send me \_\_\_\_\_ shirt(s) at \$4.95 each. I enclose a check or money order for \$\_\_\_\_\_. New York residents add sales tax.

Quantity: Small \_\_\_\_\_ Medium \_\_\_\_\_ Large \_\_\_\_\_

Name \_\_\_\_\_

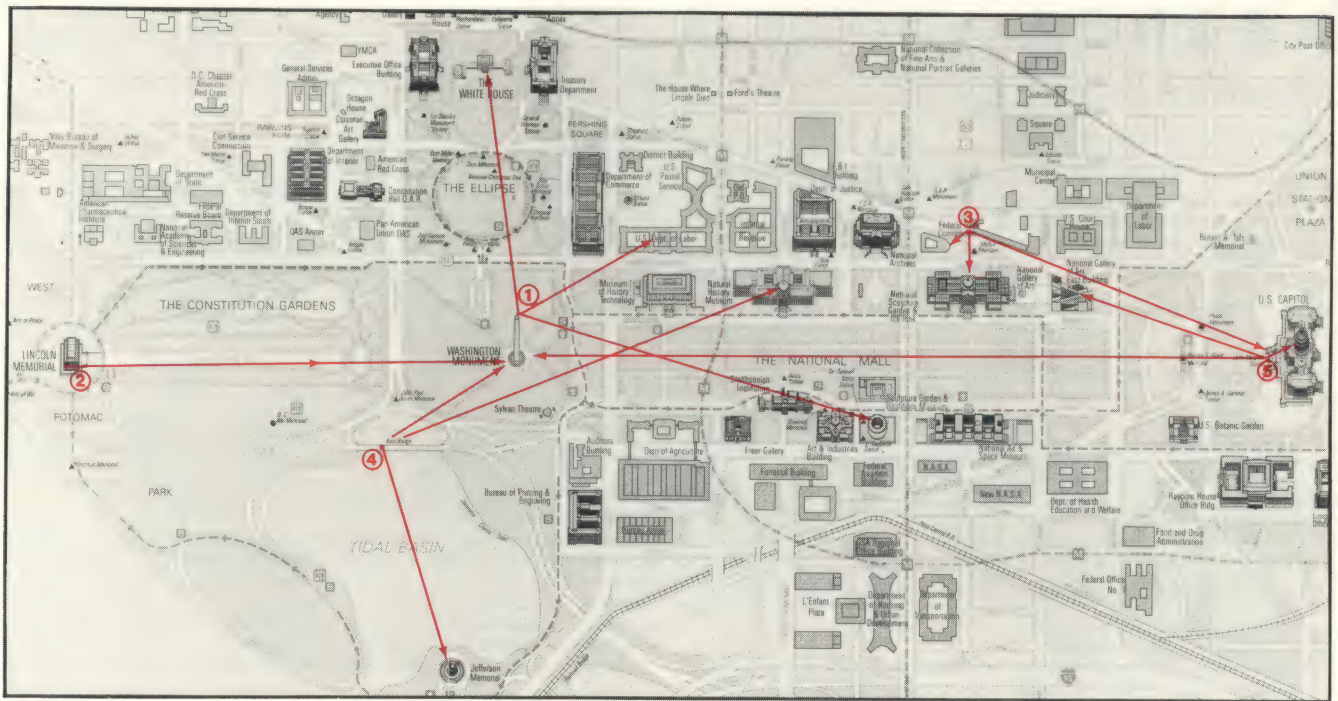
Address \_\_\_\_\_

City \_\_\_\_\_

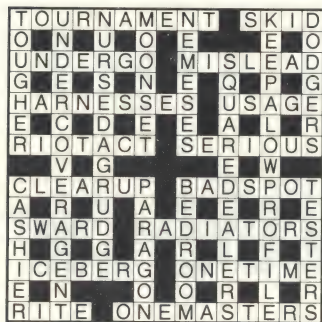
State \_\_\_\_\_ Zip \_\_\_\_\_

Please allow 4-6 weeks for delivery.





## Crossword à l'Anglaise (Page 25)



## ACROSS

- 1 Tournament (rent + amount)
- 6 Skid
- 9 Undergo (guerdon)
- 10 Mislead (mad + lies)
- 12 Harnesses (sense + rash)
- 13 Usage (U + sage)
- 14 Riot act
- 15 Serious (souse + R.I.)
- 16 Clear up (peculiar - i)
- 18 Bad spot (top + ads + b)
- 20 Sward (war + S.D.)
- 21 Radiators (as + a + torrid)
- 22 Iceberg
- 23 Onetime
- 24 Rite (tire)
- 25 One-masters (a + storm + seen)

## DOWN

- 1 Tougher (hero + gut)
- 2 Undercover agent
- 3 Nursed a grudge
- 4 Moonset
- 5 Nemeses (sees + men)
- 7 Keep a low profile (of + warlike + people)
- 8 Dodgers (Red + gods)
- 11 Square dealers
- 16 Cashier (his + care)
- 17 Paragon (Pa + groan)
- 18 Bedroom (boredom)
- 19 Testers (streets)

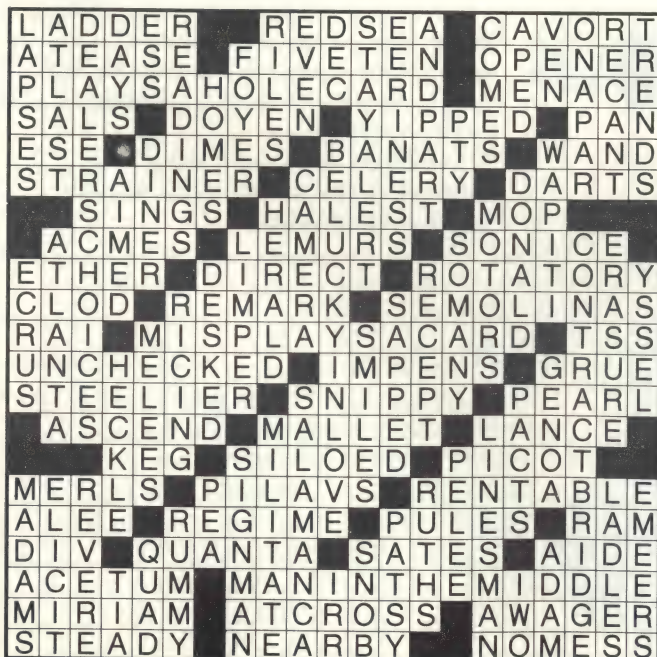
## Phrase-Maze (Page 30)

"If a man does not keep pace with his companions, perhaps it is because he hears a different drummer." Henry D. Thoreau. (The quote begins with the second "I" from the left in the bottom row.) False starts were:  
 If at first you don't succeed.  
 If a body meet a body.  
 If I had my way.  
 If I didn't care.  
 If I could be with you.

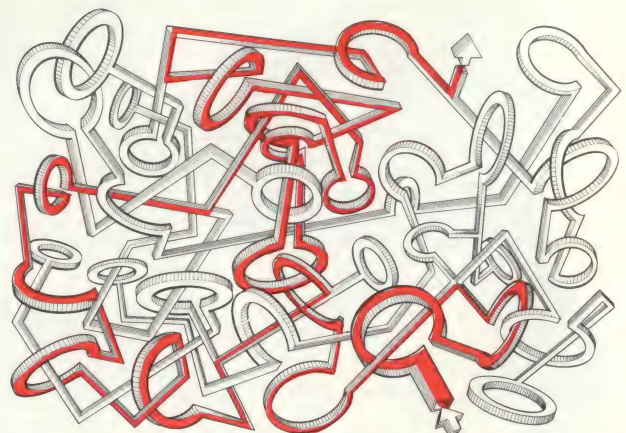
## A Hawaiian Cipher (Page 26)

1. lei
2. wa'a
3. wahine
4. Hawai'i
5. mu'umu'u
6. hale
7. hula
8. ko'u
9. kou
10. kona
11. 'oe
12. au
13. kēlā
14. keia
15. nani
16. hou
17. maika'i
18. he
19. You are a Hawaiian.
20. He has a good house.
21. This is a new lei.
22. You have a Hawaiian canoe.
23. He wahine au.
24. He hula hou ko'u.
25. He wahine nani kēlā.
26. He mu'umu'u Hawai'i kou.

## Calling Cards (Page 29)



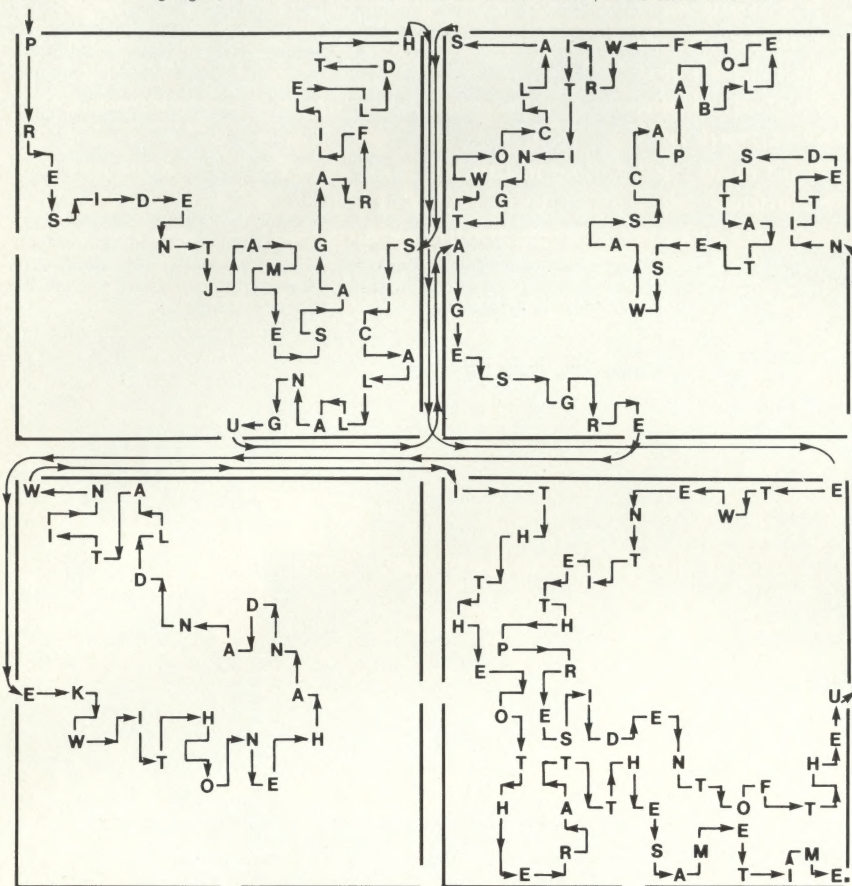
## Rings and Things (Page 30)



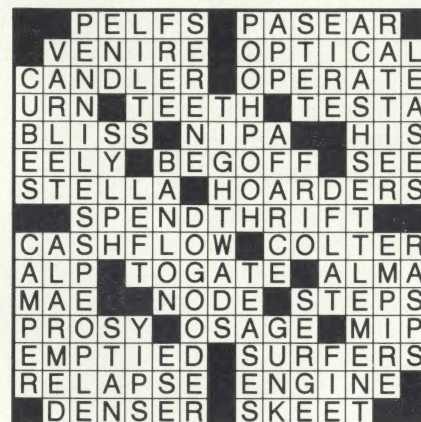


### The Amazing Maze (Page 28)

President James A. Garfield, the twentieth President of the United States, was capable of writing two classical languages, Greek with one hand and Latin with the other, at the same time!



### A Run for Your Money (Page 27)



### Headliners (Page 27)



# If you're game...we can

Late in 1977, a new adult game, "Botticelli in the Can," appeared in the West. Packaged neatly in a black and white 35mm film can, the game has attracted a small - but growing - number of enthusiasts who have called BITC "the best new brain game since SCRABBLE."\*

The object of BITC (say, "bitsy") is to think of famous personages to fit a cumulative, randomly-selected description: e.g., occupation/vocation, last name initial, geographic location, and historic period. From two to a dozen or more can play at one time and, since nearly a half-million combinations are possible, no two games will be the same. BITC can be played for a few minutes as an ice-breaker, or for a whole evening. Adults will find it a fun and challenging game.

Below is an excerpt from an Oregon newspaper review of BITC.

"...What is Botticelli in the Can?, Well, it's not easy to say. If you've ever played a cocktail-party game called Botticelli, then all you have to do is imagine how it could be played with a spinning pointer that selects object categories.

"If you've never played Botticelli at all, then the explanation is more difficult.

"Basically, it is a game of recall of the names of prominent persons throughout the ages. It's a game that gives players an opportunity to parlay, for once, a lot of the academic baggage they picked up in Survey of Western Civ or perhaps Art Appreciation 101 into stunning social success.

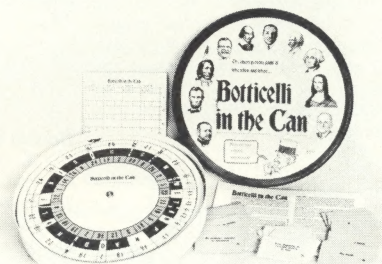
"Botticelli in the Can, in other words, is definitely an adult game in which victory is weighted in favor of show-offs, know-it-alls and trivia freaks.

The rules of the game aren't difficult, but they're vague enough to guarantee lively disputes and maybe fistfights..."

## Botticelli in the Can™

"The smart person's game of who, when, and where..."

(3990 N.W. Jameson) P.O. Box 195, Corvallis, Oregon 97330



As a 1978 introductory special, you may order one BITC at the regular price and get a second for a friend at ½-price (to one address, please). \$7 each, or 2 for \$10.50 ppd. A great small gift, guaranteed fun. Dealer inquiries welcome.

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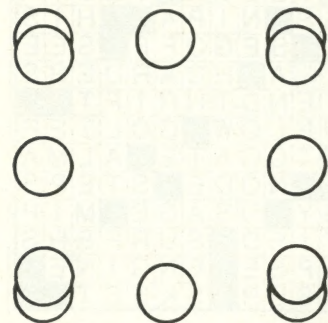
Exp. date \_\_\_\_\_ signature \_\_\_\_\_



**Puzzle 1:**

123 - 45 - 67 + 89 = 100

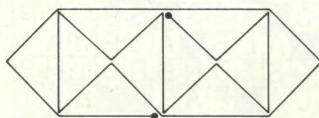
**Puzzle 2:**



**Puzzle 3:**

Place three of the coins in a triangle so that each coin is touching the other two. Then place the fourth coin in the center, on top of the other three. Since every coin is now touching every other coin, the coins are all equidistant from each other.

**Puzzle 4:**



**Puzzle 5:**

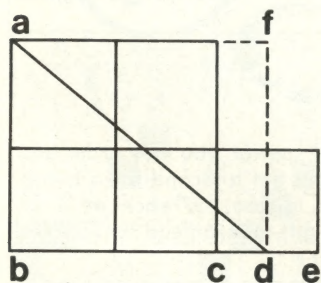
Fifty-one rectangles.

**Puzzle 6:**

The six insects are: *ant*, *moth*, *gnat*, *fly*, *flea*, *wasp*. *Mite* is the arachnid, *lice* the plural, and *wing* the insect part.

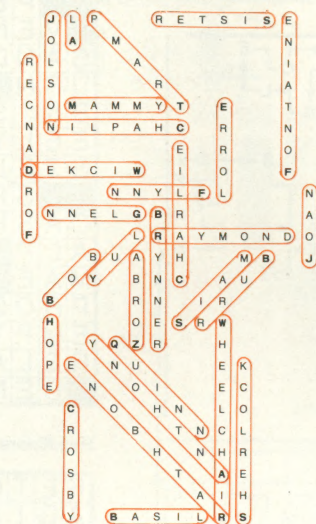
**Puzzle 7:**

It will help to imagine the square on the far right bisected vertically through point *d* (the midpoint of the line *c-e*), and the resulting right half placed above the left to form a rectangle (*a-b-d-f*). Now if you draw a straight line from point *a* to point *d*, you will see that the area of the triangle *a-b-d* is equal to the area of the triangle *a-d-f*.



**RightAngles #1 (Page 37)**

C	A	M	E	R	A	C
I	T	O	X	I	U	Q
P	E	R	C	C	D	U
O	H	W	O	A	L	E
S	Y	A	R	N	E	T
T	E	R	I	O	R	S
E	L	B	A	T	E	D



Each of these entertainers was BORN IN A FOREIGN COUNTRY.

YUL BRYNNER (Sakhalin, Russia, 1915)  
RAYMOND BURR (British Columbia, Canada, 1917)  
CHARLIE CHAPLIN (London, England, 1889)  
ANTHONY QUINN (Chihuahua, Mexico, 1915)  
BASIL RATHBONE (Johannesburg, South Africa, 1892)  
AL JOLSON (St. Petersburg, Russia, 1886)  
ERROL FLYNN (Hobart, Tasmania, 1909)  
GLENN FORD (Quebec, Canada, 1916)  
BOB HOPE (London, England, 1903)  
JOAN FONTAINE (Tokyo, Japan, 1917)

Source: *World Encyclopedia of the Film*.

**Double Cross (Page 31)**

A knight in his full armour was generally carrying as much as or more than his own weight in metal. This meant that his movements were so hampered by his burden of iron and padding that they were toned down into slow motion.—(T.H.) WHITE: *The Once and Future King*

**RightAngles #2 (Page 37)**

U	N	S	E	L	B	M
L	A	C	O	F	I	A
C	I	D	W	I	G	W
E	S	A	H	S	I	K
R	O	T	A	H	R	I
A	R	E	Z	T	I	B
T	E	H	E	A	D	S

1. SMALL PROBLEM. Tearful tot to mother: "How can I button my dress when the button is in back and I am in the front?"
2. KNowLEDGE? Owls have acquired an unearned reputation for wisdom simply because they always look profound and hoot only occasionally.
3. STAGE FRIGHT. The human mouth is wonderful. It begins working the moment you are born and does not stop until you rise to speak in public.
4. SOLVING CRYPTOGRAMS. One of the basic tools of any cryptanalyst is an acquaintance with the relative frequencies of letters of the alphabet.

**Noteworthy (Page 36)**



**"... Then Get Out of the Kitchen" (Page 39)**

S	A	R	A	H	D	E	A	L	T	P	A	S	H	A	S	F	L	O	P									
S	O	L	A	C	E	E	N	D	U	E	A	T	H	E	N	E	D	I	A	N	A							
T	O	A	S	T	M	A	S	T	E	R	S	T	E	W	A	R	D	E	S	S	E							
A	T	R	E	E	S	T	I	P	E	S	S	A	L	E	S	E	N	T	E	R	S							
G	Y	M	D	E	P	I	C	T	S	W	I	L	D	F	L	I	E	R	S									
										N	I	N	E	S	C	O	O	N	S	J	I	V	E	D				
A	M	B	S	U	R	E	R	C	H	A	R	J	U	L	E	S	C	A	B									
M	I	R	R	O	R	E	D	H	A	R	D	B	O	I	L	E	D	M	O	L	E							
B	R	I	A	R	E	D	S	T	E	N	S	A	M	B	E	R	I	O	T	A								
L	A	N	C	E	S	S	H	O	R	T	S	T	E	E	P	R	A	N	K	E	D							
E	G	G	E	R	S	N	A	F	U	S	P	E	N	D	S	U	C	C	O	R	S							
R	E	S	H	A	L	F	B	A	K	E	D	F	A	S	T	E	N	S										
										T	E	A	C	A	K	E	S	G	E	L	S	T	O	C	K	A	D	E
										C	O	N	V	O	K	E	G	R	I	L	L	W	O	R	K	S	R	O
P	R	A	L	I	N	E	G	R	E	E	N	O	I	N	K	S	W	A	G	E	R							
R	E	B	I	D	S	C	R	O	N	E	C	U	R	E	S	D	E	M	O	T	E							
I	O	O	S							S	H	O	O	T	F	O	I	L	S	D	E	S	P	O	I	L		
S	L	I	T	S	T	E	A	M	S	H	I	P	S	F	I	N	E	S	S	E	S							
M	E	L	S	P	O	R	T	A	N	T	E	F	A	V	O	R	E	S	E									
										S	P	A	R	E	G	I	L	D	S	P	O	S	I	T				
A	T	T	I	R	E	B	U	N	T						P	A	R	T	N	E	R	E	S	T				
S	P	E	A	R	S	A	L	A	T	E	A	R	L	E	N	E	A	I	M	E	E							
C	U	R	R	I	E	D	F	A	V	O	R	S	I	M	M	E	R	E	D	D	O	W	N					
A	R	R	E	T	U	R	B	A	N	E	I	D	E	A	S	R	I	O	T	E	D							
R	E	E	D	B	O	S	S	E	D	F	E	R	N	S	R	I	L	E	D									

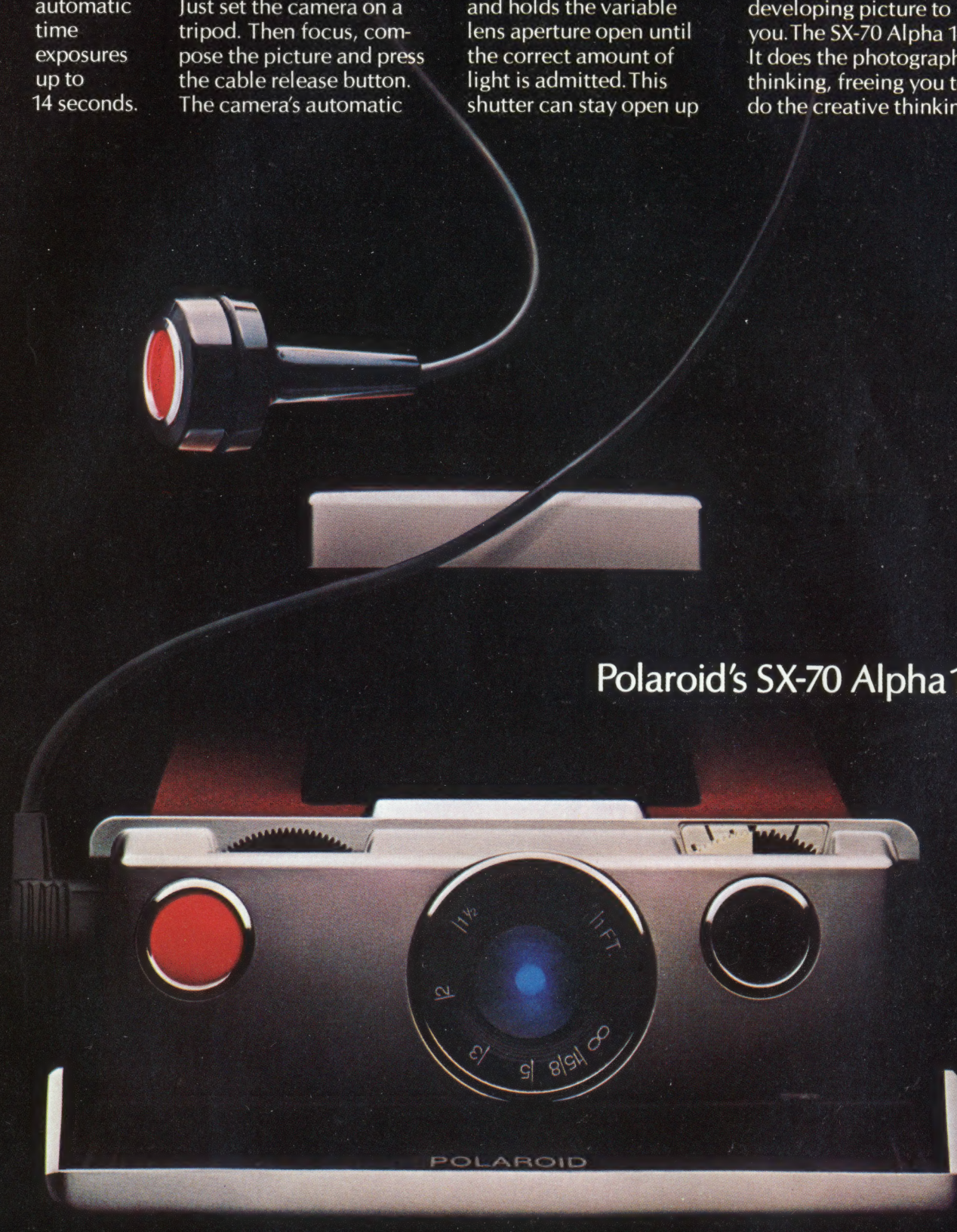


In low light it can take automatic time exposures up to 14 seconds.

Even in dim light, you can take beautiful instant pictures with the SX-70® Alpha 1 Land camera. Just set the camera on a tripod. Then focus, compose the picture and press the cable release button. The camera's automatic

time exposure system does the rest. Its unique electronics automatically sets the shutter speed and holds the variable lens aperture open until the correct amount of light is admitted. This shutter can stay open up

to an extraordinary 14 seconds, automatically. The motor-driven camera then hands the developing picture to you. The SX-70 Alpha 1. It does the photographic thinking, freeing you to do the creative thinking.

A black and white photograph of a Polaroid SX-70 Alpha 1 Land camera. The camera is shown from a front-three-quarter view, resting on a small white rectangular stand. A black cable release is connected to the camera, with its handle visible in the upper left. The camera's lens is prominent in the center, with a blue-tinted glass element. To the left of the lens is a red circular button, and to the right is a black circular button. The camera body is dark with silver-colored accents around the buttons and lens. The background is dark and out of focus.

## Polaroid's SX-70 Alpha 1



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